*Routledge Studies in Nineteenth-Century Philosophy*

# SCHELLING, HEGEL, AND THE PHILOSOPHY OF NATURE

## FROM MATTER TO SPIRIT

Benjamin Berger

# Schelling, Hegel, and the Philosophy of Nature

This book develops an original interpretation of the relationship between F.W.J. Schelling and G.W.F. Hegel. It argues that the difference between these philosophers should be understood in light of their shared commitment to the philosophy of nature and the idea that spirit, or humanity, emerges from the natural world.

The author makes a case for the contemporary relevance of German idealist philosophy of nature by walking the reader through its major themes, motivations, and arguments. Along the way, Schelling and Hegel are shown to develop key insights about the structure of reality and the dependence of living things and human beings upon inorganic natural processes. In elucidating the details of Schelling's and Hegel's respective philosophies of nature, the book challenges some of our most basic assumptions about the scope of philosophical inquiry and the relationship between matter, life, and human existence.

*Schelling, Hegel, and the Philosophy of Nature* will appeal to scholars and advanced students working on German idealism, as well as those interested in contemporary philosophies of nature and the topic of emergence.

**Benjamin Berger** is Visiting Assistant Professor and the current director of the philosophy program at the University of Hartford. He is the co-author of *The Schelling–Eschenmayer Controversy, 1801* (2020) and co-editor of *The Schelling Reader* (2021).

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## From Matter to Spirit

**Benjamin Berger**

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*This book is dedicated to my mother, Arlene, and to the memory my father, Craig.*

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From such rude Principles our Form began;
And Earth was Metamorphos'd into Man.
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Ovid, *Metamorphoses*, Book I
Translated by John Dryden (1693)

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# Introduction

When we want to understand the specificity of a philosopher's view, it can often be helpful to contrast it with the view of another philosopher. It is useful, for instance, to distinguish Aristotle from Plato; doing so sheds light on the distinctiveness of Aristotelian thought. But everyone knows that, in many ways, Aristotle is a Platonist, and to *really* see the novelty of Aristotelian thinking, one must understand it within the context of Platonism. In fact, one reason we often think about the distinctiveness of Aristotle's philosophy in relationship to Plato's philosophy in particular is because the two share quite a bit of common ground. Indeed, there is a *Platonic-Aristotelian* picture of reality, and it is only by first seeing this shared picture of reality that the substantial differences between Plato and Aristotle can be properly grasped.

We find ourselves in a similar situation when we jump forward in the history of philosophy and consider the relationship between Schelling and Hegel, the two great thinkers associated with 'absolute idealism' in post-Kantian German philosophy. There is a *Schellingian-Hegelian* picture of reality, and whatever differences there are between Schelling and Hegel must, it seems to me, be understood in light of that picture.

Making this case is one of my aims in this book. One reason such a case needs to be made is because scholarship on Schelling and Hegel has obscured their common ground by overemphasising their differences. I do not mean to simply criticise scholars of Schelling and Hegel for this. While I develop some criticisms of the scholarship below, I think there is a more general phenomenon at work here, something that cannot be understood as mere misinterpretation (although, again, there is some of this as well). It seems unavoidable to me that the closer we get to the details of a form of thinking or a school of thought, the more our general narrative about that form of thinking fades into the background. We inevitably begin to lose touch with the significance of that form of thought taken as a whole, in this case, the absolute idealism of Schelling and Hegel. My goal in writing this book, then, is largely to redirect our attention in a focused

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and sustained manner to that which the non-specialist knows in a vague and indeterminate way about Schelling and Hegel: that they are involved in some kind of shared philosophical task.

What is that task? Thomas Nagel hits upon it when he mentions Schelling and Hegel as, if not inspirational for his arguments, historical antecedents to his way of thinking in *Mind and Cosmos*.[1] In that book, Nagel takes issue with contemporary naturalism for its tendency to conceive of features of reality that are distinctively human, such as consciousness, cognition, and value, as accidental byproducts of a contingent evolutionary process. He thus provocatively asks: what if there were some necessity at work in the emergence of consciousness, cognition, and value? What if these weren't in fact accidental byproducts of physical processes but necessary features of reality? According to Nagel, the idealist response to these questions is attractive. But it means embracing the view that the relationship between mind and nature is an intimate and non-contingent one, where nature is understood to both necessarily 'give rise to conscious beings with minds' and 'to be comprehensible to such beings.'[2]

That is indeed what Schelling and Hegel think. They do not, however, develop their systems of philosophy primarily in opposition to naturalists who assume the contingency of nature's development into mind. On the contrary, their primary intellectual enemies are those philosophers who refuse that thought has access to nature as it is in itself and thus reduce all discussions of nature to discussions of what nature is like for beings like us. Taking their inspiration from both ancient Greek and early modern rationalism, Schelling and Hegel argue that we can acquire non-relative knowledge of the natural world. And, significantly, they argue that once we take this step, we subsequently learn that nature necessitates the existence of consciousness and everything that comes with it—good and bad action, social and political organisation, ordinary and scientific knowledge, aesthetic production, religious feeling—in short, the whole domain of what Schelling and Hegel call 'spirit'. The task shared by Schelling and Hegel, then, is to investigate *what nature is* and to explain how the *being* of nature necessitates the existence of spirit. They pursue this task in their respective philosophies of nature.

## Scepticism Regarding the Philosophy of Nature

What is the philosophy of nature? The very idea of a philosophy of nature can appear mysterious. Indeed, the English-language form of that phrase—'the philosophy of nature'—is seldom encountered outside of niche areas of research on, for instance, the Catholic intellectual tradition, German idealism, and early German romanticism.[3] And one might think that it is a good thing for the philosophy of nature to remain obscure to us. Indeed, to the extent that one has some sense of what the philosophy of nature

is, it is likely to be seen as, at best, a poorly named field, and, at worst, an inappropriate, misguided, and frankly bizarre form of philosophical inquiry. I think there are three main reasons that can animate such hostility to the philosophy of nature.

The first is that much of what is discussed in the philosophy of nature is now understood as falling within the purview of metaphysics *simpliciter*: space, time, force, matter, motion, causation, life, species—much of this is investigated in contemporary analytic philosophy under the name of metaphysics. This is at least partially due to the fact that much contemporary metaphysics operates within a naturalistic paradigm, such that *everything that is* is assumed to be natural; consequently, all knowledge about *what there is* is implicitly understood to be knowledge about nature. Under such circumstances, there is no need for the traditional distinction between metaphysics and the philosophy of nature. Why, then, even refer to a philosophy of nature? To insist that there is something distinctive about the philosophy of nature, as Schelling and Hegel do, is to also insist that nature is not all that there is.

The idea of a philosophy of nature may appear to be inappropriate for a different reason to a different, but no less well-represented, group of contemporary philosophers: those who believe that we don't have epistemic access to nature in itself, but only to our concepts about, or our experience of, the natural world. Traditionally, the philosopher of nature was interested not, first and foremost, in how we think about or perceive the natural world, but in nature *as such*. Yet beginning in the late modern period with Hume and a certain Kant—and then in the twentieth century with movements inspired in various ways by these thinkers—a new idea began to take hold. The idea is that philosophers should focus on how the natural world appears to us given the minds we have. This involves turning away from investigating things like the causal powers of natural objects and turning towards better understanding our specifically human relationship to the natural world. This philosophical orientation is still very much alive in many parts of what continue to be called 'analytic' and 'continental' philosophy today. When contemporary philosophers within this broad category do say things about nature, they tend to do so from within one of three general frameworks: the philosophy of science, phenomenology, or environmental philosophy, each of which attends to nature from the perspective of a living subject (or subjects). The philosophy of nature we find in Schelling and Hegel will undoubtedly appear hubristic to such philosophers, since it seeks to illuminate what nature is apart from our understanding, perception, and evaluation of the natural world.

If we focus on the idea that the philosophy of science is the proper place for contemporary philosophers to reflect upon the natural world, we hit upon a third reason that the philosophy of nature may seem to be

a misguided philosophical pursuit—at least in our own era. One might think that the reason we find philosophical reflections on the natural world in the history of philosophy is because most of that history preceded the development of the natural sciences as distinctive disciplines of knowledge, and so what we are encountering in that history is a mixture of various forms of inquiry under the name of philosophy. From this perspective, what is called philosophy today just doesn't have much in common with the broader enterprise of knowledge acquisition that once included research into the natural world.[4] Such research is properly conducted by the natural scientist. What we can do, as philosophers, one might think, is clarify the methods and conceptual implications of scientific research. And, one might think, we should understand the natural research of earlier philosophers as proto-scientific rather than 'philosophical' in our sense of the term. Aristotle's investigations into the nature of life, for instance, should be understood as proto-biological. On this view, Aristotle can be excused for not being properly scientific, since he was thinking so long ago. When we jump forward to the early nineteenth century, we simply can't make the same excuses. Schelling and Hegel were clearly not on their way to thinking in a properly natural-scientific mode; they were well aware of the scientific research of their day and developed philosophies of nature that, in some cases, conflicted with the results of that research.

I take it that this third reason to be suspicious of more recent—and by that I mean to include late modern—philosophy of nature has the most persuasive force, so it is worth briefly addressing why it falls short of convincing us to reject the philosophy of nature out of hand. We can see this if we briefly dwell on the idea that earlier philosophical investigations into nature were proto-scientific. Consider, for instance, Aristotle's investigations of life and of the realm of change more generally. Is Aristotle really thinking in the mode of natural science when he is discussing nature? At best, he is doing so some of the time; but he surely isn't *only* doing this. He is also, undoubtedly, a *philosopher* of nature, i.e., someone thinking philosophically about the fundamental features of the natural world. Just what counts as philosophical—what makes certain reflections philosophical—is of course a far more contentious topic. But, minimally, it should be uncontroversial to state that the properly philosophical points Aristotle seeks to make about nature cannot be reduced to epistemology or the philosophy of science. Aristotle is clearly more ambitious than this and wants to understand what matter *is*, what causation *is*, what growth *is*. And it would be very strange to think that, in his desire to know these things, he is no longer being philosophical.

Hegel makes this point himself: 'Aristotelian physics … is far more a philosophy of nature than it is physics.'[5] Hegel goes on to remark that the separation of the philosophy of nature from what is now understood as natural science is a modern phenomenon—and a positive one. It is positive,

because it is only in the late modern period that the distinctiveness of the philosophy of nature becomes fully apparent. Yet when we look back at the history of thinking about nature, we can see that distinctively philosophical approach at work. And this, of course, does not just concern Aristotelianism. We find philosophies of nature, for instance, in the Presocratics, in Plato, in Hellenistic philosophy, in the philosophy of the Middle Ages, and in Cartesian philosophy.[6] Philosophers have always thought philosophically about nature *as such*, and it is a modern *philosophical* prejudice to presume that the epistemic authority regarding all things natural is modern science.

But what does it mean to think philosophically about nature? I take it that an investigation into nature is philosophical if it seeks to get at the *essential features* of something natural, i.e., those features that make that thing *what it is*. That's a view about which, I believe, most philosophers of nature will agree. Disagreement will begin as soon as we consider what those features are, how those features are or aren't related to one another, and how those features (and their relationships) are accessed. On these topics, Schelling and Hegel prove to be even more provocative than we have seen them be up to this point. Their provocations on these topics are connected to the fact that they are *idealists*. In the following section, therefore, I want to explore what I understand to be the basic principles of Schellingian-Hegelian idealism. This should help us to begin to unpack what makes idealist philosophy of nature philosophical. It will also, in due course, help us to see how Schelling and Hegel can encourage us to move beyond the 'naturalist' and 'subjectivist' prejudices of our philosophical present, i.e., those prejudices that animate the first and second reasons a person might be sceptical about the very idea of a philosophy of nature.

## The Principles of Idealism

Schelling and Hegel do not understand everything that exists to be a mental representation of one kind or another—to be is *not* to be perceived. And yet we are right to consider them idealists. First of all, they are operating within, responding to, and are in various ways inspired by Kantian and Fichtean idealism. Schelling and Hegel are idealists, then, in part, because the idealism of the late eighteenth century is the occasion that allows their thinking to get off the ground, and because on many key issues in metaphysics, ethics, the philosophy of religion, political philosophy, and aesthetics they are in agreement with the earlier German idealists. But this reason for thinking of Schelling and Hegel as idealists is not a particularly good reason. It is similar to saying that Heidegger is a phenomenologist because he is thinking from within a Husserlian framework—true, but not especially illuminating. What makes the attribution of idealism to Schelling and Hegel appropriate—and what fundamentally unites them with the other German idealists—is that they interpret being as *reason*. Having

always been more of a hermeneut than a phenomenologist, Heidegger is in fact quite helpful in clarifying idealist philosophy as that form of thinking that understands being as *eidos* ('Idea'), as that which shows itself and, specifically, shows itself in the form of intelligibility.[7] Stated otherwise, the idealists think that everything is intelligible and that this is not accidental; everything is intelligible, for the idealists, because intelligibility is essential to what it means to be. The thought presumably goes back much further in the history of humanity, but it is articulated in an especially influential manner by Parmenides: 'For the same thing is for thinking and for being.'[8] Schelling and Hegel agree. Indeed, one of the ways they conceive of reason is as the identity of thought and being—the sheer reality that is intelligibility itself, the essence of what is.

Since being as such is reason, it is mistaken to conceive of reason as a mere faculty or power of the mind. Yes, human beings have a distinctive capacity to know, but as we will see over the course of this book, the most sophisticated form of this capacity to know is the capacity to extricate oneself from the limited epistemic standpoint that is one's own perspective and to contemplate the nature of *what is* from the 'perspective' of *what is*. The idealist identification of thinking and being—that is, their interpretation of reality as reason or Idea—does not imply that the world thinks or reasons about things. As James Kreines puts it with respect to Hegelian idealism specifically, 'Hegel is interested in reason in the world; but this is not to say that the world is conscious, or reasoning.'[9] The same goes for Schelling. Both philosophers are idealists in the sense that they seek to think immanently or, what is the same thing, to grasp the reason of the world.

Thus, according to Schelling and Hegel, being is rational. This means that everything that *is*, for Schelling and Hegel, is an expression of reason, or the absolute, or God, or the identity of thought and being (all of which name the same thing). As I see it, the following nine principles are bound up with Schelling and Hegel's shared understanding of reality as rational. Running through these principles should therefore clarify what kind of idealists I take them to be and how I take this idealism to inform their understanding of the philosophy of nature. According to Schelling and Hegel:

1. Since everything that *is* is an expression of reason, even those elements of reality that prove to be very different from one another—such as nature and spirit—will also necessarily be the same or 'identical' in some sense, namely, as expressions of reason. Schelling and Hegel are monists, then, despite the fact that they reject substance monism (which they reject because reason, or the absolute, is not a substance or 'thing', and because there are many substances or things in the world).[10]

2. While spirit *is* reason (that is, as one of the two most general ways that reason expresses itself, the other being nature), we will fail to understand the task of absolute idealism if we simply equate spirit with reason. There is something specific about the way that reason realises itself in the life of humanity; this, and only this, is spirit.
3. Since the being of natural phenomena is rational, the intrinsic rational structure of natural phenomena is what is most real about them. How things appear to us in ordinary life is not illusory or lacking in reality, but things essentially are their rational structures. What a plant is, for instance, will be whatever the rational structure of plant life turns out to be.
4. Since the rational structures of things is what is most essential to their being, acquiring knowledge of these rational structures will be one of the fundamental aims of idealist philosophy of nature. To stick with the example of the plant, Schelling and Hegel will attempt to clarify *what plants are*, and this clarification will refer to the rational (and in Hegel's case, logical) structure of plant life.
5. Since everything is rational, there is, in principle, an explanation for why the world is the way it is. Schelling and Hegel are committed to some version of the principle of sufficient reason. They are therefore not content with merely describing what there is;[11] understanding what there is requires answering 'why' questions, such as 'why do plants exist?'[12] Although they do not frame the questions in this manner—since doing so begins with the fact of what there is, and, as we will see, they do not begin with such facts—Schelling and Hegel nevertheless believe that there is an answer to questions of this kind, and that is because, on their view, everything that is is rational.[13]
6. The explanation for why there are plants in the world is not only intelligible in principle; it is something about which we can indeed come to have knowledge. And the reason we can understand why plants exist is ultimately *because* of what reason *is*: to be truly rational, reason must be realised as a form of reality that can reflect back upon what reason *as such* is. That is, reason must prove to exist not only as a natural world but as spirit, or humanity, such that the intelligibility of what is can in fact be contemplated. We can answer 'why' questions not on account of something *we* have done, but because reason, or being, has necessitated our existence as forms of reality that can answer 'why' questions.
7. When we are in the mode of grasping the rational structure of reality, we are necessarily dependent upon a form of rational insight or intellectual intuition in which we identify with reason *as such*. This has important implications for the methodology of the philosophy of nature: our fundamental understanding of the natural world—that is,

our *philosophical* account of nature—cannot be grounded upon empirical research, since empirical research is by definition dependent upon the distinctive perspective of the researcher and her separation from the object of research. Purely rational thought, by contrast, allows the philosopher to abstract from her limited perspective and access the essential being of nature, i.e., its rational core. All knowledge of the rational structure of the world will therefore proceed on the basis of an intellectual intuition or identification of thought and being.[14]

8. Since our access to the being of nature, or what nature is, will involve taking a step back from experience, it also requires that we bracket all of our practical concerns. Theoretical reason, for both Schelling and Hegel, is more fundamental than practical reason. We cannot understand how we should live if we do not first understand *what there is* and *why* there is what there is.[15] This is central to how the absolute idealists understand themselves as moving beyond what they see as the subjectivist standpoint of Kant and especially Fichte.[16] As Schelling makes entirely clear in his dispute with Fichte and Eschenmayer—and Hegel follows Schelling on this point—what the ancient Greeks called 'physics' must be systematically prior to what they called 'ethics', because the former explains why human beings capable of action exist in the first place.[17]
9. Since reason is the ultimate explanation for everything that is, Schelling and Hegel do not think it makes sense to inquire into how it is that being *became* rational. (On this point, the late Schelling departs from idealism *writ large*—I discuss this below.)[18] As we will see, the idealists are profoundly interested in explaining how reality comes to involve *thinking beings*, i.e., spirit, and their explanation for the existence of spirit refers to that which is *not* spiritual, namely, nature. If we want to explain why the world is rational, however, or why reason *is*, we cannot refer to anything but reason itself. It is its own explanation for being, hence the equation of reason with God. The emergence of spirit that we will be considering in detail below, then, has nothing to do with the emergence of reason *as such*, but strictly concerns the emergence of that form of life that is capable of making intellectual contact with the being or essence of what is.

We now have a better sense of how Schelling and Hegel will answer the question about what makes the philosophy of nature philosophical. It will be that form of thinking that attends to the rational structure of the natural world, and it will proceed from a perspective that is immanent to nature. But we have yet to see how the various structures of nature are related to one another on the idealist account. Let's turn to that now.

**Nature-Philosophical Explanation**

I have suggested that Schelling and Hegel understand all of reality to be rational and, for this reason, are rightly understood as monists. They do not, however, think that reason-monism rules out affirming differences of various kinds. On the contrary, for both philosophers, reason, or the absolute, expresses itself in different ways. At the most general level, the absolute expresses itself as nature, on the one hand, and spirit, on the other. Within the domains of nature and spirit, reason further differentiates itself. For example, within the domain of nature specifically, reason is expressed as matter and its motion, as light, as chemical processes, as plant and animal life, and so on.

Illuminating the difference between nature and spirit—as well as the differences between the most general features of nature and the differences between the most general features of spirit—is of the utmost importance to Schelling and Hegel. It is central to their shared philosophical vision, however, that the differences between nature and spirit—and the differences internal to nature and spirit—cannot be understood in terms of sheer difference. And this is not only because everything natural and everything spiritual is, at some level, an expression of one and the same thing, reason. There is a more specific sense in which the different features of natural and spiritual reality are related: *some of those general features of reality account for the existence of other general features of reality*. Above, we considered the question, 'Why are there plants?' Now we learn that, for both Schelling and Hegel, part of the answer to that question will have to refer to some *other* feature of the natural world, something other than plant life.

This is why the absolute idealists understand nature to be a system of stages or levels (*Stufen*). There aren't simply different features or elements of the natural world—different types of inorganic processes, for instance, or different types of living things. These different features are, for Schelling and Hegel, *stages* that are organised systematically in the sense that one stage gives rise to the next. What does that mean? It means that one stage explains the existence of the next. Or, to use an image that is by no means foreign to idealism, reality can be represented as a *scala naturae* or great chain of being, with each link in that chain explaining the existence of the next link in the chain.

Of course, the idea that reality can be understood as a system of stages or as a great chain of being is not an invention of Schelling's or Hegel's. In conceiving of nature in this manner, they are drawing upon a much longer intellectual history.[19] Schelling and Hegel depart radically from traditional accounts of the *scala naturae*, however, insofar as they invert the standard

order of explanation. They do not argue—as the Neoplatonists do, for instance—that the highest, most perfect level of reality explains the lower levels of reality. Instead, Schelling and Hegel argue that the lower levels of reality provide some kind of explanation for the higher, more perfect levels. Tyler Tritten makes this point well in his interpretation of Schelling:

> [Schelling] stands Neoplatonism on its head by inverting its order of procession … The question does not concern the hierarchical but the ontological ordering of matter. For Schelling, procession is not a descent into being (and eventually non-being) from a One beyond being, but an elevation, intensification and potentiation of being.[20]

As we will see, Hegel rejects Schelling's attempt to explain the emergence of higher levels of reality in terms of intensification and potentiation (*Potenzierung*); he develops a different way to think about such emergence. But he follows Schelling in inverting the logic of emanation and, in doing so, remains committed to a generally Schellingian logic of emergence. Whereas emanation describes a process of ontological degradation, the idealist logic of emergence shared by Schelling and Hegel describes a process of ontological perfection. This is a distinctive form of the *scala naturae* in which being proves to be intelligible 'from the bottom up'. At the most general level, this means that the order of explanation moves from nature to spirit.

The ontological implications of this view should not be overlooked: the reason explanation will move from nature to spirit is because *the existence of nature* is, in an important sense, the *reason* that spirit exists. If we want to know why spirit (i.e., humanity) exists, we must refer to what nature is and why nature exists; and this is because nature is some kind of 'cause' of spirit. The same is true about the relationship between the lower and higher stages of nature. The existence of life, for instance, is explained in some way by the existence of inorganic processes.

The type of explanation or cause we're dealing with here is odd. It is not like any of the types of explanation with which most of us are familiar. One stage of nature—e.g., 'the chemical process'—does not explain another stage—e.g., 'life'—in the sense that it is its efficient cause. Nor does one stage explain another in the sense that it is the end or goal of that second stage; the chemical process, in this case, is not that at which life aims, and therefore it is not the teleological explanation of life. Stages of nature are not explanations for other stages either in the sense that they are efficient or final causes.

But the idealists do think that some stages of nature explain other stages. Although we have considered an important difference between the idealists and the Neoplatonists,[21] it can be helpful to note a similarity in their approach to explanation, since the kind of explanation Schelling and

Hegel are after is similar to what we find in Neoplatonist metaphysics. For the Neoplatonist, there is a very important sense in which the One, the first and highest principle, is the cause of the lower levels of reality. But this is not what we today understand as efficient causation, where a change of state occurs at some point in time, as if emanation were a historical event.[22] Emanation, or the overflowing of the One, is an atemporal process. It concerns ontological dependence, the fact that the lower, less perfect levels of reality depend upon the highest principle for their being. And, importantly, these lower levels have being, i.e., they are levels of *reality*, not by chance but because of something to do with what that highest principle *is*: the One requires that they be and maintains them in their being.[23]

A similar idea is found in Schelling and Hegel, albeit in an inverted form. For the idealists, inorganic matter explains the existence of life, and life explains the existence of spirit, but the lower levels of reality don't cause the higher levels in the way we typically understand a cause to bring about an effect. The kind of explanation we find in idealist philosophy of nature is something else. The point they are making concerns ontological dependence and necessary existence: there is something about the being of the lower stages of nature that necessitates that there are higher stages—stages that, for this reason, depend upon the lower.[24]

Consequently, the metaphysical picture with which we are left is also in certain respects similar to the Neoplatonist picture: given that any one level of reality is explained with reference to other levels of reality, all levels are ontologically continuous even in their difference from one another.[25]

To understand this in any greater detail will require that we turn to Schelling's and Hegel's respective accounts of the relationships between the different stages of nature. That is what I do in Chapters 2–7 of this book.

## Emergence

As I have suggested, Schelling and Hegel are not only idealists but also emergentists of some kind. I am by no means the first to describe them as such.[26] It is important to note, however, that (i) despite the occasional appearance of the term 'emergence' in Schelling and Hegel's thought, it is not used frequently and it is certainly not used as a term of art; and (ii) by using the term myself I do not mean to push the idea that what Schelling and Hegel are doing is closely related to contemporary philosophical discussions of emergence, although there are certainly many similarities.[27] Indeed, while I do not explore it here, I understand the idealists' way of thinking about the development from nature to spirit to not only resonate conceptually with later nineteenth and early twentieth century discussions of the topic, but to have exerted both a direct and indirect influence on a wide range of philosophical schools concerned with emergent phenomena,

including British emergentism.[28] Nevertheless, it is important that we treat the emergentism of Schelling and Hegel as the specific form of emergentism that it is, i.e., to treat it on its own terms. I hope, then, that my use of this concept in my reconstruction of idealist philosophy of nature does not unnecessarily muddy the waters of what is already an obscure area of German idealism.

The first thing that we should emphasise when considering Schelling and Hegel's emergentism is that they are interested in the rational development—or what I will sometimes call, following Hegel, the logical explication—of the stages or levels of nature. We already know that what is rational has ontological significance for Schelling and Hegel, so this should not suggest that they are discussing a form of development or explication that has 'merely' rational or 'merely' logical or 'merely' conceptual significance. They are interested in the actual stages of nature, i.e., the levels of reality that exist, and they understand the actual (yet atemporal) emergence of one level from another to be a matter of rational development or explication. One level of reality emerges rationally from another. Hegel is especially helpful in bringing out this point—and, significantly, he takes his clarity on this issue to be essential to the manner in which his system makes an advance upon Schelling's. (I return to this in the following section of this introduction.) It may therefore be helpful to briefly consider an example of how this rational or logical emergence works in Hegel.

The example I have in mind concerns the emergence of life from the logic of chemical interaction. According to Hegel, when chemical substances are combined or separated, something obvious yet significant happens: the original substance is destroyed, and this destruction makes possible the existence of something else, either the substance that results from combination or the various substances that have been separated out from one another. Of course, this can happen again and again. Explicitly, then, we have here a finite substance that is replaced by another finite substance in a process that seems to go on endlessly. If we focus, however, on what is going on *implicitly*, we see that there is something like a *total* chemical process that *continues on* through the destruction of each finite substance. This is the idea of a process in which some form of reality continues to perpetuate itself, even through moments of finitude. Explicitly, there is no selfsame being that carries on existing throughout these transformations, nothing that realises the 'endless' or 'non-finite' character of the total chemical process. But the idea is nevertheless *there* implicitly, the idea of a form of reality that continues to be even after moments of destruction. And, according to Hegel, because there is such an implicit idea within the logic of the chemical process, there must be a form of reality that realises explicitly what is only logically implicit within the chemical process. According to Hegel, this is *life*, since living things reproduce *themselves* as organisms

of *another* generation—continuing their existence even after they die. Living things must necessarily exist.

As we will see, Schelling does not thematise the specifically logical nature of the development from the chemical process to life. But he is as committed as Hegel is to the view that there is a rational development at work from one stage of nature to the next. Reason, or the absolute, unfolds gradually, not in time, but in rational stages, and the philosopher of nature is supposed to clarify that development.

This example also helps us to draw out another essential feature of Schellingian-Hegelian emergence: the rational explication of one stage of nature from another is *necessary*. In the case discussed above, life *necessarily* emerges from the chemical process. According to the idealists, *there could not have been a world that didn't include living things*. As we will see, the same type of argument is made for every single stage of nature and, ultimately, for spirit itself. Nature necessarily exists, and because nature *is*, spirit necessarily exists as well. Contingency is not part of this story in any way. Yes, there will be an important place for contingency in nature, at least according to Hegel, but that has nothing to do with what the idealists understand to be the rational development leading from nature to spirit; that development is necessary through and through.

That the development from matter to life to spirit isn't accidental or contingent for Schelling and Hegel—that this development could not, under any circumstances, be otherwise—is, I think, the hardest pill to swallow when it comes to the entire framework of their philosophies of nature. One might go along with Schelling and Hegel in thinking that the philosopher has epistemic access to the being of nature—an idea that, I suggested above, is already quite provocative in our world today. One might go along with their conception of reality as entirely intelligible. One might go along with their understanding of nature as a great chain of being that is explained from the bottom up. But the idea that the fundamental features of nature and the existence of human beings is *necessary*—one might think that is a step too far. It's one reason, I take it, that this aspect of the philosophy of nature is often downplayed. This is the aspect of their thinking that presents the greatest challenge to us, insofar as our reaction to their necessitarianism exposes one of the fundamental assumptions of our time: that appealing to *chance* is the furthest we feel we can possibly go in attempting to explain the existence of consciousness. Nagel was right to highlight this assumption, and he was right to see Schelling and Hegel as allies who might help us to call it into question.

My necessitarian interpretation of Schelling and Hegel puts me at odds with readers of idealist philosophy of nature with whom I am otherwise in a great amount of agreement. Adrian Johnston, for example, argues that we learn from the philosophy of nature that 'non-natural human subjects can be seen to arise in immanent, bottom-up fashions from nature itself,'[29]

and on this point I certainly agree. Yet he goes on to argue that nature, for Hegel, 'gives birth to' … 'human monsters' … 'as a matter of contingency'.[30] Johnston writes:

> I contend that the emergence of the organic out of both the mechanical and the physical, as well as the emergence of human life out of the organic, are contingencies, ontologically speaking. Hegel's talk of these emergences as instances of 'progress' need not be construed as symptomatic of a nowadays unpalatable ontotheological teleology of an unsophisticated sort. Instead, whether natural-philosophical functionalist criteria for progression to higher forms really are fulfilled by actually existing beings is up to chance.[31]

In my view, this couldn't be further from the truth about Hegel. While there are certainly some features of human life that are contingent according to Hegel, he also thinks that our humanity is the *telos* of reality itself, and—moreover—that this is a *telos* that *could not have gone unrealised*. The same goes for Schelling's understanding of our place in the world. I will try to show, in the following chapters, that this does not make their philosophies of nature unsophisticated by any stretch of the imagination.[32]

I do agree with Johnston, however, that the emergentism we find in idealist philosophy of nature is profoundly compelling for a number of reasons, and many of these are at least notionally separable from the idealist commitment to the necessity of spirit's emergence from nature. One reason idealist emergentism is compelling, is because it is a thoroughgoing *realism*. It doesn't reduce the higher levels of reality, such as life and spirit, to mere matter in motion; it doesn't reduce all of the complexity of the material universe to the mere representations of subjectivity; and it doesn't reduce the material and the spiritual to sheer vitality. Matter, life, and spirit are all *real*, according to the idealists, and they each have a kind of ontological integrity—an integrity that is in no way problematised simply because some of them are dependent upon others. On the contrary, the higher levels are shown to *be real* precisely insofar as we can explain their existence with reference to that upon which they depend. Here we arrive at Schelling and Hegel's response to those who would be suspicious of the philosophy of nature on either naturalist or subjectivist grounds: the naturalist, who reduces *everything that is* to mere nature, is an anti-realist about the human world; and the subjectivist, who thinks that experience is all there is or all that can be known, is an anti-realist about the most basic levels of the material world. Absolute idealism, by contrast, does not only insist upon the reality of the material and the spiritual, but it seeks to demonstrate *why they are*. This is the potential payoff of the ambitious metaphysical thinking at work in absolute idealism. It might be able to affirm,

from the perspective of philosophical reason, the things we ordinarily take for granted: that we are real, that apparently living things are indeed alive, that matter is at the basis of life, that none of this is illusory, and that there are real differences between these elements of the world.[33]

Given the common misunderstanding of Schelling and Hegel as 'organicists', let me reiterate that Schelling and Hegel do not conceive of the inorganic and the spiritual in terms of some more fundamental activity of *life*. The inorganic world is real and more basic than the organic world. In the 1810 *Stuttgart Lectures*, Schelling—so often considered to be an organicist or a vitalist—is clear: 'Hylozism postulates a *primordial* life in matter, whereas we do not. By contrast, we claim that matter contains life not *in actu* but only *in potentia*, not explicitly but implicitly.'[34] One of the significant lessons of idealist philosophy of nature, therefore, is that genuine anti-reductionism secures the ontological integrity of both the higher *and* the lower forms of being by distinguishing between the ontological structure of that which *leads* to life and spirit, on the one hand, and life and spirit *as such*, on the other.

Another reason one might be compelled by the nature-philosophical vision of Schelling and Hegel concerns its unabashed hierarchical character. The higher forms of nature, despite the fact that they owe their existence to the lower forms, are nonetheless rightly assigned a greater axiological significance. Schelling makes this point in the *Stuttgart Lectures* by distinguishing between ontological and axiological priority. In this passage, and elsewhere in Schelling's system, the natural is identified with the real and the spiritual with the ideal:

> The ideal ranks higher than the real in respect to its dignity …
> The first power [i.e., the real] must by its very nature precede the second one [i.e., the ideal]; that is, between the two powers there exists a priority and a posteriority; the real is by its very nature the first, and the ideal is the latter. The inferior thus is indeed posited *before* the superior one, though not in an axiological sense, which would be contradictory, but as regards its *existence*.[35]

What is first in the order of being is less precious, less worthy of our admiration, than what is ontologically derivative. We see the same axiological commitment in Hegel, who is entirely clear that life is more valuable than the earth itself, even if life depends upon the earth as its ground.

> It has been rumoured round the town that I have compared the stars to a rash on an organism where the skin erupts into a countless mass of red spots; or to an ant-heap... In fact I do rate what is concrete higher

> than what is abstract, and an animality that develops into no more than a slime, higher than the starry host.[36]

Neither Schelling nor Hegel romanticise nature by understanding ontologically primitive natural forms as more valuable or deserving of our admiration and respect on account of their ontological priority; on the contrary, that which is derived—that which comes later, systematically speaking—is deserving of greater admiration and respect.

Ernst Bloch—someone deeply influenced by Schelling's and Hegel's philosophies of nature—highlights the alchemical logic at work in this thought. *Pace* the astrologist, whose 'magic … descends from above', the alchemist understands perfection to emerge from that which is only implicitly perfect, and so focuses on '[ascent] from below into something better'.[37] The most basic level of reality—matter—is not where we find perfection; such perfection is only found fully realised in the human being.[38] And yet, just as the alchemist understands gold to emerge in some sense from lead, so too does the idealist understand the human to emerge from the inorganic material world. The process of perfection is both immanent and hierarchical.

### The Difference Between Schelling and Hegel

As I see it, Schelling and Hegel are in full agreement with respect to the hierarchical structure of reality, even if they differ in how they think about significant features of this hierarchical structure. I therefore disagree with Dale Snow, who argues that Schelling differs from Hegel, in part, because, unlike Hegel, who 'stresses a dialectic that would collapse into incoherence without its hierarchical structure, Schelling emphasises a dynamic view of both nature and spirit which does not subordinate one to the other.'[39] There are certainly texts in which Schelling appears to hold such a view, and I will consider this fact in Part I of this book. But typically—and, in my view, when he is at his best—Schelling sheds as much light upon the hierarchical structure of reality as does Hegel. We can miss this if we become overly enthusiastic about Schelling's turn to an ontology of nature in the wake of Kantian and Fichtean idealism. Although Schelling insists that the philosophy of nature must be the starting point for philosophical science—and in this way departs from what he sees as the subjectivism of Kant and Fichte—this does not mean he abandons the Enlightenment celebration of human reason and freedom. On the contrary, Schelling argues that the humanity that is rightly championed in the modern era is only fully explicable from the perspective of the nature which makes possible and necessary such an ontologically distinct and, indeed, higher, form of life. In other words, while the philosophy of nature inaugurated by the

young Schelling is, as Beiser argues, part of a 'struggle against *subjectivism*' it also seeks to document a struggle *for* subjectivity, a subjectivity that is the ontological consequence rather than ground of reality.[40] Against all anthropocentric ways of thinking, Schelling is nevertheless a decidedly 'anthropotelic' philosopher.

While Schelling is often misinterpreted as rejecting hierarchical systematicity in his turn to nature, Hegel is often misunderstood as a subjective idealist, as if Schelling's philosophy of nature were a mere detour in the history of the idealist metaphysics of subjectivity that begins with Kant and reaches its culmination in Hegel. For example, Elaine P. Miller suggests that while 'thinkers such as Schelling attempted to return to "nature in itself" rather than to a fiction about nature … Hegel radicalized Kant's elimination of the natural.'[41] On this view, Hegel's philosophy of nature is not so much a 'metaphysics of nature' but a 'metaphysics of the compounded knowledge of nature'.[42] Interestingly, this is an interpretation shared by some scholars who are more sympathetic to Hegel. Robert Pippin, for example, claims that Hegel's system is very much unlike Schelling's in that the former seeks to 'leave nature behind'.[43] Kirill Chepurin echoes this remark, arguing that 'whereas in Schelling, *Naturphilosophie* has to do directly with the real, Hegel's philosophy of nature has for its subject not nature "as such", but rather a new, "spiritual" nature, nature as cognized by *Geist*.'[44]

Interpretations such as these not only confuse Hegel's ontology of nature for something far more epistemological, but they also obscure the close proximity of the Schellingian and Hegelian projects. For Hegel is unabashedly committed to understanding the structure of nature itself, pursuing a version—albeit significantly reformulated—of Schellingian philosophy of nature, which transgresses the subjectivist limits of transcendental idealism and seeks to immanently illuminate the being of nature. To embrace this interpretation of Hegel, however—and therefore to embrace this interpretation of the Schelling–Hegel relationship—one must set to the side the neo-pragmatist interpretations of Hegel that reduce his concern for the truth of being *as such* to a concern for the epistemic norms that guide us in the activity of thinking. Peter Dews has made this point in his outstanding recent book, *Schelling's Late Philosophy in Confrontation with Hegel*:

> Once the essentially neo-Kantian discourse of a hypertrophied 'normativity' is left behind, it becomes clear that both the mature Hegel and Schelling … seek to validate their deepest metaphysical insights through immensely ambitious, extended narratives of the emergence of human self-consciousness from nature, and its slow, painful, and hazardous evolution.[45]

One can't properly make sense of the Schelling–Hegel relation if one remains closed off to the idea that, for both Schelling and Hegel, (i) spirit is superior to nature; and (ii) our philosophical investigation into this more perfect form of reality must be preceded by a philosophy—that is, an ontology—of non-human nature.

Because I defend the idea that Schelling and Hegel share a metaphysical vision, I run a different hermeneutic risk—one of collapsing the difference between Schelling and Hegel entirely. And, indeed, so far I have been treating the metaphysical vision of Schellingian–Hegelian philosophy as undifferentiated. But there are, of course, differences between these philosophers, and—far more importantly for the present study—there are differences between how they understand the atemporal, rationally necessary, and hierarchical development that leads from nature to spirit. Moreover, these differences are philosophically rich, and I think they force one to ultimately take sides. Therefore, while one of my aims in this book will be accomplished if the Schelling I present in it appears uncannily similar to Hegel and the Hegel I present appears uncannily similar to Schelling, I am also committed to arriving at a deeper understanding of the differences between these philosophers. Yet it is my view that we get to the heart of those differences only if we first acknowledge and attend to the fact that they set out to accomplish the same philosophical task. In this way, we can bring to light some of their fundamental differences that would otherwise go unnoticed.

One of those differences concerns philosophical methodology. In fact, Hegel saw this as the essential difference between his system and Schelling's.[46] According to Hegel, the philosophy of nature must be pursued logically, which means one must render explicit what is logically implicit in the most abstract 'levels' or 'stages' of nature. Once Hegel arrived at his logical method, he never ceased to insist that it is the only way to think immanently, i.e., to understand nature as it is in itself. From Hegel's perspective, Schelling's various experiments in philosophical methodology—which include the utilisation of intellectual intuition without a preceding phenomenology that would justify that intuition; reasoning *more geometrico*; and presenting philosophical ideas in dialogical form—fail to achieve the immanence of a properly scientific philosophical practice. Thus, while Hegel praises Schelling's speculative approach to nature—for only with such an approach can the philosopher overcome the subjectivist limits of Kantian philosophy—Hegel is deeply critical of the methodology he understands Schelling to employ.[47] In particular, Hegel sees the Schellingian approach to nature to be far too formalistic and dependent upon an analogical understanding of natural phenomena which by definition abandons the principle of immanence central to a logical and therefore properly rational method.

It is true that Schelling never conceived of nature's structure in terms of either logical or conceptual development, and in his late philosophy he relentlessly criticises Hegel's system for making the 'logical' or 'conceptual' out to be something that is there from the start, rather than showing that concepts and the creatures who think them emerge from an objective, natural world. As the late Schelling says, 'Concepts as such only exist in consciousness; they *are*, therefore, taken objectively, *after* nature, not *before* it.'[48] But it is important to recognise that Schelling remains, even in this late work, committed to the strictly rationalist project of disclosing *what there is* through *thought*. Until the end of his life, he argues that *what is* is *rational*, that reality is structured by ideas, even if *concepts* are ontologically derivative. Schelling's rejection of a dialectical, logical method and his refusal to understand 'conceptual' development as intrinsic to nature should not, therefore, be interpreted as a rejection of rationalism. Rather, these aspects of Schelling's thought are merely indicative of the fact that his rationalism is pursued along different lines than Hegel's. As we will see, not only is the philosophy of nature just as rationalist a programme for Schelling as it is for Hegel, but for Schelling, at least prior to his late thought, nature is *utterly* rational in itself, and it is not determined in any manner by contingency (as it is for Hegel). That being said, Schelling's various methods for explicating nature's rational structure cannot be understood as logical in the technical, Hegelian sense of the term.

There would be good reason, then, to focus a substantial portion of this study and especially its comparative elements on methodology in the philosophy of nature. It would certainly be consistent with the way Hegel saw the difference between Schelling and himself. But I believe that to take our cue from Hegel on this matter would be to privilege a certain conception of philosophical practice, a conception that is Cartesian in spirit in that it takes the question of method to be fundamental. To pursue the Schelling–Hegel relation from the perspective of method, then, is to side with Hegel from the start. Although I discuss method at important junctures in what follows and offer an extended analysis of Hegel's method in Chapter 5, I will not focus thematically on the methodological differences between Schelling and Hegel. Instead, I will largely focus on their different visions regarding what nature is.[49]

It is one thing to say that Schelling and Hegel agree that through an ahistorical process nature raises itself to higher stages of organisation and, ultimately, necessitates the existence of spiritual freedom. But how does nature do this? What is the 'mechanism' at work in this process? Schelling explains the emergence of one level of reality from another in terms of potentiation (*Potenzierung*), where each level or stage of nature is conceived of as a higher potency (*Potenz*) of matter—a process that comes to completion, at least from the side of nature, in the human

animal. It is thus through a process of nature's self-intensification, or what he also understands as self-duplication, that forms of nature come to exist (although, again, this is an atemporal or ahistorical process). Hegel understands the development from nature to spirit to proceed by way of negation, in which the sheer externality of nature gradually negates its own external character more and more completely, achieving more and more concrete forms of inwardness and subjectivity. As I will argue in the concluding chapter to this book, the difference between conceiving of nature's development in terms of potentiation and negation has profound consequences for the role that nature's history plays in Schelling's and Hegel's thought. In the end, I argue, it is Hegel's understanding of nature as reason that is external to itself that makes it impossible for him to imagine that nature's historical development is rationally and therefore philosophically significant. Schelling, by contrast, points in a more promising direction for thinking about the historical emergence of life and human existence.

## Final Introductory Remarks

To grasp the significance of the difference between Schelling and Hegel requires that we look closely at their philosophies of nature and treat them, for the most part, separately. This is what I do in Chapters 1–7. Chapters 1–3, found in Part I, focus on Schelling, and Chapters 4–7, found in Part II, focus on Hegel. Part III consists of a single chapter, Chapter 8, in which I explore the possibility that the philosophy of nature could become a historical form of philosophy, i.e., a form of philosophy attentive to nature's history.

Taken as a whole, my hope is that this volume will be a helpful introduction to and guide through Schelling's and Hegel's philosophies of nature. Although there is a great deal in their philosophies of nature that I think is right, I do not make any sustained argument for this, and I would be surprised if one were to walk away from reading this book convinced that either Schelling or Hegel hit the mark on every nature-philosophical topic to which they turn their attention. The reason I believe it is worthwhile to spend time with these details has more to do with the idea that becoming familiar with their way of thinking can help to shake us out of our contemporary philosophical prejudices and potentially lead us to a more accurate understanding of our place in the world and the aims of philosophical thought.

Because I am concerned in this book with explaining Schelling's and Hegel's views—and not the genesis of their views, e.g., the way their views are inspired by or developed in critical response to their predecessors and peers—I largely ignore the details of their relationship to other

philosophers. Plato, Aristotle, Bruno, Boehme, Spinoza, Leibniz, Kant, Herder, Jacobi, Fichte—these are philosophers of the utmost importance for the development of the absolute idealists' philosophies of nature, and a complete understanding of how Schelling and Hegel get to their view is not possible without engaging with those details. But this book is quite long as it is, and there is plenty of extraordinary scholarship on these topics. What I want to do here is simply make an argument about what Schelling and Hegel are doing, to try and clarify the details of their philosophies of nature, and to suggest something about why I take Schelling's philosophy of nature to be more promising in the end. Achieving these goals will require that we suspend interest in the historical origins of their views and also take Schelling and Hegel at their word when it comes to their (at times, uncharitable) interpretations of previous philosophers.

One final introductory remark. The term 'spirit' ('*Geist*') is usually understood by both Schelling and Hegel as a non-natural form of existence that involves everything distinctively human: the mind and its powers, the character of the individual person, all human relationships, the products of human creativity. Yet the term '*Geist*' at times signifies something else, something more 'supernatural'—something closer to what Kant has in mind in his critique of Swedenborgian mysticism.[50] Schelling especially is led down this path at certain moments, most of all in the *Clara*, in which the spiritual is understood along the lines of a ghostly presence extended in space.[51] In what follows, I do not consider this form of spirit, because it is my view that the very idea of a material or quasi-material spirit, a spirit located in space, goes against the fundamental insight that Schelling and Hegel are trying to bring across: that spirit is different from nature, even if nature is the source of spiritual life. It is important to note Schelling's flirtation with spiritualism, however, because it signals one of the conceptual risks involved in the project of idealist philosophy of nature. If one seeks to understand the human spirit as emergent from nature, there is always the danger of accidentally conceiving of the emergent phenomenon in terms of its ground, i.e., of understanding spirit in terms of nature.[52] As we will see, both Schelling and Hegel are typically quite successful in avoiding that risk.

## Notes

1 Thomas Nagel, *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False* (Oxford: Oxford University Press, 2012), p. 17.
2 Nagel, *Mind and Cosmos*, p. 17.
3 The term has also been used by causal essentialists. See, for example, Brian Ellis, *The Philosophy of Nature: A Guide to the New Essentialism* (London and New York: Routledge, 2002).

4 See Hegel, *Vorlesungen über die Philosophie der Natur*, Volume 2 of Hegel's *Gesammelte Werke* 24, ed. Wolfgang Bonsiepen and Niklas Hebing (Hamburg: Felix Meiner, 2014), p. 940. Further references to this volume appear as *VPN* 2 (and references to Volume 1 appear as *VPN* 1).

5 G.W.F. Hegel, *Werke in 20 Bänden*, ed. Eva Moldenhauer and Karl Markus Michel (Frankfurt am Main: Suhrkamp, 1970), Volume 9, Introductory Addition, p. 11; *Philosophy of Nature*, Part II *of the Encyclopaedia of the Philosophical Sciences*, trans. A.V. Miller (Oxford: Oxford University Press, 2004), p. 2. Further references to Hegel's *Werke* appear as *W* followed by volume and page number, e.g., *W* 9: 11.

6 What was historically called 'natural philosophy', therefore, will involve—from the perspective of late modern idealism—elements of natural science and elements of philosophy of nature. For a brief account of the evolution of the concept of *philosophia naturalis*, see Wolfgang Bonsiepen, *Die Begründung einer Naturphilosophie bei Kant, Schelling, Fries, und Hegel: Mathematische versus spekulative Naturphilosphie* (Frankfurt am Main: Klostermann, 1997), p. 13.

7 See, for example, Martin Heidegger, *Hegel's Phenomenology of Spirit*, trans. Parvis Emad and Kenneth Maly (Bloomington and Indianapolis: Indiana University Press, 1988), pp. 141–142.

8 *A Presocratics Reader: Selected Fragments and Testimonia*, ed. Patricia Curd and trans. Richard D. McKirahan (Indianapolis: Hackett, 1996), p. 46.

9 James Kreines, *Reason in the World: Hegel's Metaphysics and its Philosophical Appeal* (Oxford: Oxford University Press, 2015), pp. 22–23.

10 See Kreines, *Reason in the World*, for a critique of the view that Hegel is any kind of (metaphysical) monist.

11 In this way, absolute idealism differs dramatically from what Dalia Nassar has recently called romantic empiricism, which she sees as setting aside classical philosophical explanation in favour of philosophical elucidation and description. See Dalia Nassar, *Romantic Empiricism: Nature, Art, and Ecology from Herder to Humboldt* (Oxford: Oxford University Press, 2022).

12 Kreines is excellent on the connection between reason being in the world and classical metaphysical inquiry.

> Hegel's view is that metaphysics, at its best, addresses the most general and direct questions about *why* or *because* of things; it concerns what Hegel calls 'reason' (*Vernunft*) or 'the rational' (*das Vernünftige*) 'in the world'. The topic is not at base epistemological; it is not, for example, about our practices of giving and asking for reasons in the sense of justifications for beliefs and actions. It is the metaphysical topic of the explanatory reasons why things do what they do, or are as they are.

Kreines, *Reason in the World*, p. 3; see also pp. 7–8. Importantly, however, on Kreines's reading, there are some things for Hegel that are inexplicable or incompletely explicable, and he should therefore not be understood as a rationalist metaphysician, despite being concerned with reason in the world. As should be clear from my remarks here and in the chapters that follow, I do see Hegel as a rationalist metaphysician of some kind. This is, in part,

because I depart from Kreines's view regarding explanation and the lower levels of reality. Whereas for Kreines's Hegel, 'the primitive is real but only incompletely explicable' and 'only the most mediated is completely explicable' (Kreines, *Reason in the World*, p. 25), I understand Hegel to see even the most basic levels of reality as fully explicable, even if those levels do not perfectly or completely exhibit rationality.

13 This does not mean that Schelling and Hegel argue that one can answer all 'why' questions in the same manner. For instance, Hegel thinks that many natural phenomena are determined by chance, and so it would be misguided to think that strictly rational explication is appropriate to answering questions pertaining to those phenomena. There is a difference, then, between questions like the one about why plants exist and questions such as, 'why is this particular oak tree diseased?' Nevertheless, the latter question can be answered, because there is a *reason* that the oak tree is diseased; part of that reason has to do with the fact that nature is determined by contingency—a fact about nature that is necessitated by the structure of reason or being itself.

14 Although my interpretation of idealism departs considerably from Pippin's, I agree with him entirely that, 'if it is possible to identify some common core to the tradition classified as "German Idealist", it would at the very least be a sustained critique of empiricism.' Robert B. Pippin, *Hegel's Realm of Shadows: Logic as Metaphysics in* The Science of Logic (Chicago and London: University of Chicago Press, 2019), p. 11.

15 As Peter Dews remarks, 'from his earliest publications Schelling resisted the idea of the primacy of the practical.' Peter Dews, *The Idea of Evil* (Oxford: Blackwell, 2008), p. 73. It is true that the authors of the 'Earliest System-Programme' (which likely include both Schelling and Hegel) ask how nature must be constituted if there are to be 'moral beings', and there is no question that this issue remains important for Schelling and Hegel throughout their philosophical development (*W* 1: 234; 'The Earliest System-Program of German Idealism,' trans. H. S. Harris in *Miscellaneous Writings of G.W.F. Hegel*, ed. Jon Stewart [Evanston: Northwestern University Press, 2002], p. 110). But neither Schelling nor Hegel is exclusively interested in nature for the sake of practical reason. On the contrary, idealist philosophy of nature primarily seeks theoretical comprehension of nature for the sake of such comprehension. It is for this reason that Schelling claims that the philosophy of nature is more fundamental than the philosophy of spirit; the former 'proves its principles purely theoretically, and has to make no particular, practical demands, unlike the latter which precisely for this reason possesses no purely theoretical reality.' F.W.J. Schelling, *Sämmtliche Werke*, ed. K.F.A. Schelling (Stuttgart: Cotta, 1856–1861), Division I, Volume 4, p. 91; *On the True Concept of the Philosophy of Nature*, trans. Daniel Whistler and Judith Kahl in *The Schelling-Eschenmayer Controversy, 1801* (Edinburgh: Edinburgh University Press, 2020), p. 53. Further references to Schelling's *Sämmtliche Werke* appear as *SW*, followed by division number, volume number, and page number, e.g., *SW* I/4: 91.

16 On this point, I disagree with Karen Ng, according to whom all of the idealists defend the unity of theoretical and practical reason. See, for example, Karen Ng, 'The Idea of the Earth in Günderrode, Schelling, and Hegel' in *The Oxford*

*Handbook of Women Philosophers in the Nineteenth Century*, ed. Kristin Gjesdal and Dalia Nassar (Oxford: Oxford University Press, forthcoming).

17 Letter to Fiche, 19 November 1800 in *Historisch-kritische Ausgabe*, Series III, Volume 2.1, ed. Thomas Kisser (Stuttgart: Frommann-Holzboog, 2010), p. 280; *The Philosophical Rupture between Fichte and Schelling*, trans. and ed. Michael Vater and David W. Wood (Albany: State University of New York Press, 2012), p. 45. *SW* I/4: 92; *On the True Concept*, p. 54. Further references to Schelling's *Historisch-kritische Ausgabe* appear as *HKA*, followed by series, volume, and page numbers, e.g., *HKA* III/2.1: 280.

18 See also Peter Dews, *The Late Schelling in Confrontation with Hegel* (Oxford: Oxford University Press, 2023).

19 I disagree with Alfredo Ferrarin, then, who argues that Hegel's philosophy of nature rejects the classical tradition's conception of reality as a scale or chain of nature. According to Ferrarin's Hegel, the 'dialectical concept' *guides* 'the hierarchical structure of the whole of the Philosophy of Nature', and 'the progress of the idea cannot be taken as concrete', i.e., it cannot be understood as 'a great chain of being or *scala naturae*' (Alfredo Ferrarin, *Hegel and Aristotle* [Cambridge: Cambridge University Press, 2001], pp. 210–211—see also pp. 92–93). But I think this makes what Hegel calls 'the concept' out to be something external to nature, when Hegel's view is rather that nature is the concept's own self-externality. The point I'm making here is quite technical, and it won't become clear until Part II of this book. Suffice it to say that, on my reading, once we recognise that the rational, logical, or conceptual is entirely *immanent* to nature for Hegel, we see that his discussion of the development within nature is meant to be understood as internal to the *being* of nature, even if this development does not unfold in time, and even if one stage of nature does not actually *become* another stage; as we will see, the existence of one stage still necessitates the existence of the next for Hegel. This is why referring to the classical understanding of the *scala naturae* can be so helpful. For it too had to do with atemporal, ontological relationships. Ferrarin seems to think that Hegel's rejection of natural-historical metamorphosis would oppose him to the notion of the *scala naturae*, but this is something that, at least until the eighteenth century, had always described an ahistorical system of being. Cf. Arthur O. Lovejoy, *The Great Chain of Being* (Cambridge, MA: Harvard University Press, 1936).

20 Tyler Tritten, *The Contingency of Necessity: Reason and God as Matters of Fact* (Edinburgh: Edinburgh University Press, 2017), p. 76. (See also Werner Beierwaltes, 'The Legacy of Neoplatonism in F. W. J. Schelling's Thought', trans. Peter Adamson, *International Journal of Philosophical Studies* 10 [2002], p. 415.) As we will see in the chapters to follow, that Schelling conceives of the development of nature in terms of intensification or 'potentiation' fundamentally distinguishes his philosophy of nature from Hegel's. Tritten is very helpful in bringing out this distinctive feature of Schelling's view. My interpretation differs from Tritten's in that I do not see this as involving a move towards the *contingency* of the development from matter to spirit. Tritten writes: 'The produced is always more than the source of production; consequences exceed their anterior in rank and dignity. The world did not begin with the perfect,

but it *might* end with it' (Tritten, *The Contingency of Necessity*, p. 93, emphasis modified). As I see it—and as I will discuss in detail below—neither Schelling nor Hegel thinks the development of nature *might* end in perfection. For the idealists, not only has nature already been perfected in the existence of humanity, but such perfection was inevitable; there was never any possibility that perfection would have gone unrealised.

21 A further difference that is significant for my interpretation of idealism is that the idealists reject the apophatic character of much Neoplatonism. See, for example, *Ennead* VI.8, Chapter 8. Following Whistler, I see the critique of apophaticism as being just as central to Schellingian idealism as it is to Hegelian idealism (see especially *Schelling's Theory of Symbolic Language: Forming the System of Identity* [Oxford: Oxford University Press, 2013]). What Hyppolite says about absolute knowledge in Hegel's system is equally true of the standpoint of reason in the early Schelling: 'Absolute knowledge means the elimination of the ontological secret … The only secret … is that there is no secret' (Jean Hyppolite, *Logic and Existence* [Albany: State University of New York, 1997], p. 90). For an alternative interpretation of Schelling, one that ties his thought to the negative-theological dimension of Neoplatonism, see Naomi Fisher, *Schelling's Mystical Platonism: 1792–1802* (Oxford: Oxford University Press, forthcoming), especially Chapter 7.

22 The type of cause here is also different from the 'paradigmatic' and 'instrumental' causes that the Neoplatonists add to the four Aristotelian causes in their attempt to understand the goings-on in nature. Here we are dealing with what Carlos Steel describes as a principle 'used to explicate relations between all levels of being'. Carlos Steel, 'Why Should We Prefer Plato's *Timaeus* to Aristotle's *Physics*? Proclus' Critique of Aristotle's Causal Explanation of the Physical World', *Bulletin of the Institute of Classical Studies* 45, Supplement 78 (2003), p. 182.

23 See, for instance, *Ennead* VI.8, Chapter 7. See also Richard Sorabji, *Time, Creation, and the Continuum* (London: Duckworth, 1983), p. 318. As Lloyd Gerson makes clear, if one understands the One to emanate according to necessity, this cannot be a necessity that is external to the One, and, in fact, 'to say that the One acts by necessity could mean nothing else but that it acts according to its will' (Lloyd Gerson, 'Plotinus's Metaphysics: Emanation or Creation?', *Review of Metaphysics* 46.3 [1993] p. 561). As John Deck puts it, '[the One] is what it ought to be, but it is so entirely through itself' (John N. Deck, *Nature, Contemplation, and the One: A Study in the Philosophy of Plotinus* [Burdett: Larson, 1991]), p. 26. As we will see, the necessity that the idealists understand to be at work in the development of nature is also conceived of as a kind of self-determination, and not a necessity that comes to nature from without.

24 As I see it, this is a decidedly non-Aristotelian type of cause, but if one wanted to make sense of it in terms of one of the four Aristotelian types of explanation, one could argue that it at least shares something in common with a logical feature of efficient causation. Ned Hall's 'Two Concepts of Causation' is helpful in pointing out that, within the logic of causation, there are at least two things going on: there is a relationship of *dependence*—in which the effect

requires the cause in order to be—and there is a relationship of production—in which the cause actively brings about the effect (Ned Hall, 'Two Concepts of Causation' in John David Collins, Edward J. Hall, and L.A. Paul, *Causation and Counterfactuals* [Cambridge, MA: MIT Press, 2004], pp. 255–276). As we have seen, the higher levels of reality, for Schelling and Hegel, are dependent upon the lower levels, and the lower levels could in this respect be understood as 'causes' of the higher. But the type of dependence Hall has in mind is not the dependence of natural kinds or forms of reality upon others, and this dependence is not atemporal, so the similarity is, in the end, quite superficial. An area of contemporary research that is potentially more ripe for comparison is the literature on grounding (a very Schellingian but very non-Hegelian concept). Explanations that refer to grounding relationships do not exclusively concern different levels reality, although some of them do. See *Metaphysical Grounding: Understanding the Structure of Reality*, ed. Fabrice Correia and Benjamin Schnieder (Cambridge: Cambridge University Press, 2012). On the importance of distinguishing between causation and grounding, see Sara Bernstein, 'Grounding is Not Causation', *Philosophical Perspectives* 30.1 (2016), pp. 21–38.

25 On the continuity of the levels of reality, see *Ennead* V.2, Chapter 1. See also Lovejoy, *The Great Chain of Being*, pp. 55–65.

26 Schelling is often described as promoting some form of 'emergentism'. See, for example, Dieter Wandschneider, 'The Philosophy of Nature of Kant, Schelling and Hegel' in *The Routledge Companion to Nineteenth Century Philosophy*, ed. Dean Moyar (London: Routledge, 2010), p. 79; Dieter Sturma, 'Logik der Subjektivität und Natur der Vernunft: Die Seelenkonzeptionen der klassischen deutschen Philosophie' in *Die Seele: Ihre Geschichte im Abendland*, ed. Gerd Jüttemann, Michael Sonntag, and Christoph Wulf (Weinheim: Psychologie Verlags Union, 1991), p. 244; and Michael Vater, 'Being in centro: The Anthropology of Schelling's *Human Freedom*', *Lo Sguardo: Rivista di Filosofia* 30 (2020), p. 127. When Schelling is identified as an emergentist, it is typical that similar claims about Hegel follow (e.g., in Wandschneider, 'The Philosophy of Nature of Kant, Schelling and Hegel', p. 94 and Sturma, 'Logik der Subjektivität und Natur der Vernunft', p. 252). Interestingly, although Schelling is often understood as paving the way for Hegelian emergentism, he has inspired less sustained work than Hegel has on the subject. Kenneth Westphal—while dismissive of Schelling's contribution to the topic—celebrates the fact that 'Hegel sought to avoid both substance dualism and eliminative reductionism by developing a sophisticated and subtle emergentism' (Kenneth R. Westphal, 'Philosophizing about Nature: Hegel's Philosophical Project' in *The Cambridge Companion to Hegel and Nineteenth-Century Philosophy*, ed. Frederick Beiser [Cambridge: Cambridge University Press, 2008], p. 305). In distinguishing Hegel from Spinoza, Brady Bowman has argued that the former replaces the latter's parallelism with some kind of emergentism, noting 'Hegel's use in the Preface [to the *Phenomenology*], unusual for its time, of the term *emergieren*' (Brady Bowman, *Hegel and the Metaphysics of Absolute Negativity* [Cambridge: Cambridge University Press, 2013], p. 222). James Blachowicz similarly argues for an emergentist reading of Hegel in *Essential*

*Difference: Toward a Metaphysics of Emergence* (Albany: State University of New York Press, 2012), interpreting Hegel's role in modern European philosophy as analogous to Aristotle's in ancient Greek philosophy. Blachowicz's interpretation resembles that of Wandschneider in certain respects; for both, emergentism is linked to modality: nature involves the potential to actualise human existence. See Wandschneider, 'Hegels Naturontologischer Entwurf – Heute', *Hegel-Studien* 36 (2001), especially pp. 151–166, and Wandschneider, 'Hegel und die Evolution' in *Hegel und die Lebenswissenschaften*, ed. Olaf Breidbach and Dietrich von Engelhardt (Berlin: VWB, 2000), pp. 231. From yet another angle, Adrian Johnston draws heavily upon Hegel in his promotion of a Žižek-inspired 'transcendental materialism' in which 'more-than-material subjectivity' is shown to emerge from material nature. See, for example, Adrian Johnston, *Adventures in Transcendental Materialism: Dialogues with Contemporary Thinkers* (Edinburgh: Edinburgh University Press, 2014) and *Prolegomena to Any Future Materialism, Volume II: A Weak Nature Alone* (Evanston: Northwestern University Press, 2019). For my previous engagement with Johnston on this topic, see 'Idealism and Emergence: Three Questions for Adrian Johnston' and his response, 'Transcendentalism in Hegel's Wake: A Reply to Timothy M. Hackett and Benjamin Berger' in *Pli: The Warwick Journal of Philosophy* 26 (2014), pp. 194–203, 204–237.

27 As Jessica Wilson argues, central to the emergentist picture is the 'coupling of cotemporal material dependence with ontological and causal autonomy', making 'dependence with autonomy' an essential feature of all forms of metaphysical emergentism (Jessica Wilson, *Metaphysical Emergence* [Oxford: Oxford University Press, 2021], p. 1—emphasis modified). Contemporary emergentists typically identify the origin of thinking about such a coupling in John Stuart Mill. The idealists certainly get there earlier. See, for instance, Schelling's discussion of the relationship between self-determination and dependence in his *Philosophical Investigations into the Essence of Human Freedom* (*SW* I/7: 346; *Philosophical Inquiries into the Nature of Human Freedom*, trans. James Gutmann [La Salle: Open Court Publishing, 1936], p. 18), discussed in detail in Chapter 3 below. It's worth noting that some of the contemporary literature on emergence pushes it in the direction of non-metaphysical explanation, and we should not think that what Schelling and Hegel are doing has much to do with this form of emergentism, except for providing us with some resources to challenge such merely epistemological accounts of emergence. To take one example, Elanor Taylor has argued that metaphysical emergentism runs into a problem she calls the 'collapse problem'; she suggests we should consequently embrace a strictly epistemological version of emergentism, i.e., one concerning the relationship between different types of scientific explanation as opposed to an emergentism concerning the relationship between supposedly different levels of reality. The 'collapse problem' turns on the view that, 'rather than tracking distinctions between levels of properties in nature, emergence'—thought along metaphysical lines—seems to track 'distinctions between … arbitrary, gerrymandered groups of properties' (Elanor Taylor, 'Collapsing Emergence', *The Philosophical Quarterly* 65 [2015], pp. 738–739; see also Elanor Taylor, 'An Explication of Emergence',

*Philosophical Studies* 172 [2015], pp. 653–669). One could interpret Schelling and Hegel as having developed a distinctive way of avoiding this 'collapse problem' by providing an account in which (i) emergent levels of reality are shown to be necessarily different in *kind* and (ii) the emergence of natural kinds is shown to be necessitated. This means that idealist emergence will not be a form of emergence that refers to any inexplicable 'gaps' in nature. Indeed, as Errol E. Harris has argued, the feature of idealist *Naturphilosophie* that sets it apart from all subsequent philosophies of emergence is its commitment to explaining *why* life and spirit emerge from nature, as opposed to simply claiming *that* such emergence 'occurs'. See Errol E. Harris, *The Spirit of Hegel* (New Jersey: Humanities Press, 1993), pp. 189–190. It seems to me that, from the perspective of contemporary philosophy, one thing the idealists are offering is a view on the relationship between grounding and a certain form of (non-mereological) emergence. For a discussion of the similarities and differences between the grounding and emergence literature, see Stephan Leuenberger, 'Emergence' in *The Routledge Handbook of Metaphysical Grounding*, ed. Michael J. Raven (New York and London: Routledge, 2020), pp. 312–323.

28 Samuel Alexander, for example, was a scholar of Hegel's philosophy of nature. See his early paper, 'Hegel's Conception of Nature', *Mind* 11 (1886), pp. 495–523.

29 Johnston, *Prolegomena, Volume II*, p. xi.

30 Johnston, *Prolegomena, Volume II*, p. 27.

31 Johnston, *Prolegomena, Volume II*, p. 67.

32 The interpretation of Hegel as arguing for the contingency of nature's forms has also been pursued by Wes Furlotte. See, for example, *The Problem of Nature in Hegel's Final System* (Edinburgh: Edinburgh University Press, 2018), p. 47.

33 While I emphasise throughout this book the grandiose nature of the idealist project, I think one could also see in it something quite epistemically cautious. Lawrence Cahoone has made this argument with respect to emergentism more broadly. According to Cahoone, we grasp the conservative element of emergentist metaphysics when we compare it to reductionism:

> Whereas ontological reductionism aspires to the Promethean task of explaining all kinds of things by one kind, emergence accepts that the explanatory autonomy—which is not to say independence or mutual indifference—of different scientific disciplines mirrors the ontological pluralism of nature.

The more metaphysically conservative perspective, then, recognises that 'nature is pluralistic and hierarchically organized, with sets of natural traits asymmetrically dependent upon others, all equally real' (Lawrence Cahoone, *The Orders of Nature* [Albany: State University of New York, 2013], p. 52). While the idealists are committed to the possibility of deriving a vast range of natural processes from sheer reason—and while they might, for this reason, be seen as setting themselves a 'Promethean task'—the view they ultimately present us with is one that affirms the reality of those things we ordinarily take to be real; it is a view that refuses the radical, destabilising gesture of *explaining away* such things and thereby undermining, rather than accounting for, everyday experience.

34 *SW* I/7: 444; *Stuttgart Seminars*, trans. Thomas Pfau in *Idealism and the Endgame of Theory* (Albany: State University of New York Press, 1994), p. 215.
35 *SW* I/7: 427; *Stuttgart Seminars*, p. 202. As he puts it in a note to the *Ages of the World*, 'the last with regard to dignity … may be the first with regard to all development.' See also *SW* I/8: 205n; *Ages of the World* [1815], trans. Jason M. Wirth (Albany: State University of New York Press, 2000), p. xxxixn.
36 *W* 9: Addition to § 341, 365; *Philosophy of Nature*, p. 297. Hegel makes the same point about the relationship between nature and spirit, the former of which is the primary manifestation of reason and yet is 'inferior to spirit', the derivative manifestation of reason. Consequently, according to Hegel, 'one must not rate the natural world more highly than the products of human will and action.' *VPN* 2: 965.
37 Ernst Bloch, *The Principle of Hope, Volume II*, trans. Neville Plaice, Stephen Plaice, and Paul Knight (Cambridge, MA: The MIT Press, 1986), p. 638. On Bloch's inheritance of both Schelling and Hegel, see Cat Moir, *Ernst Bloch's Speculative Materialism: Ontology, Epistemology, Politics* (Leiden: Brill, 2019).
38 For a compelling argument against naturalism from the perspective of the axiological commitments of German idealism, see Sebastian Gardner, 'The Limits of Naturalism and the Metaphysics of German Idealism' in *German Idealism: Contemporary Perspectives*, ed. Espen Hammer (London: Routledge, 2007), pp. 19–49. As Gardner suggests, criticising reductionist metaphysics from this axiological perspective is compatible with criticising reductionist metaphysics from the strictly theoretical principles of German idealism. Gardner, 'The Limits of Naturalism', p. 49n.
39 Dale E. Snow, *Schelling and the End of Idealism* (Albany: State University of New York Press, 1996), p. 111.
40 Frederick Beiser, *German Idealism: The Struggle Against Subjectivism, 1781–1801* (Cambridge, MA: Harvard University Press, 2002).
41 Elaine P. Miller, *The Vegetative Soul: From Philosophy of Nature to Subjectivity in the Feminine* (Albany: State University of New York Press, 2002), p. 24.
42 Miller, *The Vegetative Soul*, p. 124.
43 Robert B. Pippin, *The Persistence of Subjectivity: On the Kantian Aftermath* (Cambridge: Cambridge University Press, 2005), pp. 189–190. See Chapters 4 and 7 below.
44 Kirill Chepurin, 'Nature, Spirit, and Revolution: Situating Hegel's Philosophy of Nature', *Comparative and Continental Philosophy* 8.3 (2016), p. 302. More recently, this interpretation has been articulated by George di Giovanni, whose *Hegel and the Challenge of Spinoza* is in many ways a polemic against the idea that Hegel is a Schellingian in any significant sense. According to Giovanni, 'Schelling and Hegel simply never trod the same conceptual grounds as Hegel instead did in company with Kant and Fichte—or even in company with Jacobi, for that matter.' George di Giovanni, *Hegel and the Challenge of Spinoza: A Study in German Idealism, 1801–1831* (Cambridge: Cambridge University Press, 2021), p. 236.
45 Peter Dews, *Schelling's Late Philosophy in Confrontation with Hegel* (Oxford: Oxford University Press, 2023), p. 10.

46 *W* 20: 436; *Lectures on the History of Philosophy: Volume III*, trans. E.S. Haldane and Frances H. Simson (London: Routledge and Kegan Paul, 1963), pp. 526–527.
47 See, for example, *W* 20: 435–437; *Lectures on the History of Philosophy: Volume III*, pp. 518, 525–527.
48 *SW* I/10: 140; *On the History of Modern Philosophy*, trans. Andrew Bowie (Cambridge: Cambridge University Press, 1994), p. 145. Translation modified.
49 One could argue that, by bracketing the question of method and focusing upon philosophical vision, I am implicitly privileging a Schellingian conception of philosophical practice as intuitive (yet no less rational). Such an assessment of my approach would not be unfounded.
50 Immanuel Kant, *Dreams of a Spirit-Seer and Other Writings*, trans. Gregory R. Johnson and Glenn Alexander Magee (Westchester: Swedenborg Foundation, 2002).
51 *SW* I/9; *Clara, or On Nature's Connection to the Spirit World*, trans. Fiona Steinkamp (Albany: State University of New York Press, 2002). On the direct influence of Swedenborgian mysticism on Schelling's *Clara*, see Friedemann Horn, *Schelling and Swedenborg: Mysticism and German Idealism*, trans. George F. Dole (Westchester: Swedenborg Foundation, 1997), pp. 35–43. For an unorthodox account of Schelling's interest in Swedenborg, see Daniel Whistler, 'Silvering, or the Role of Mysticism in German Idealism', *Glossator* 7 (2013), pp. 151–185.
52 We find a formally similar—and, in this case, morally repulsive—nature-philosophical error in both Schelling's and Hegel's discussions of racial difference. At various points, both philosophers understand the graduated sequence of nature's stages to be recapitulated within the human species as a series of races increasing in rationality. By conceiving of humanity in terms of natural stratification, the ontological distinctiveness of humanity is utterly obscured. See, for instance, *W* 10: §§ 393–394, 57–70; *Philosophy of Mind*, *Part III of the Encyclopaedia of the Philosophical Sciences*, trans. William Wallace and A.V. Miller (Oxford: Oxford University Press, 1971), pp. 40–51 and *SW* II/1: 500–509. Following Justin E.H. Smith's analysis of the development of the concept of race in early modern European philosophy, we might see in this racialist tendency in idealist philosophy of nature a biologistic corruption of philosophical anthropology. See Justin E.H. Smith, *Nature, Human Nature, and Human Difference: Race in Early Modern Philosophy* (Princeton and Oxford: Princeton University Press, 2015).

# Part 1
# Schelling

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# 1 Subjectivity in Nature

In recent years, Schelling has come to be more widely recognised as one of the great philosophers of the German idealist tradition. No longer seen as a merely transitional figure on the way 'from Kant to Hegel', he is now commonly acknowledged to have carved out a distinctive philosophical space from which he developed a unique perspective on fundamental philosophical questions. One of these questions concerns how spirit or humanity is related to the natural world. In the following three chapters, Schelling's conception of the nature-spirit relation is explored in order to demonstrate that one of his key ideas is that humanity is ontologically distinct and yet emergent from nature.

## Schelling's Intellectual Development

A significant hermeneutic difficulty presents itself as soon as one decides to approach Schelling thematically, as I attempt to do here. For one must decide which 'Schelling' will be under investigation. The nature-spirit relation is thematised throughout Schelling's sixty years of philosophising and for that reason cannot possibly be done justice in a single study. Yet even if I were to limit my attention to one period of his development, the question of 'which Schelling' would not be entirely resolved, since his perspective can sometimes appear to change dramatically even within a year or two. Hegel's claim that 'Schelling worked out his philosophy in view of the public'[1] may have been unfair in certain respects, but it speaks to an essential feature of Schelling's thought, one that continued to characterise Schelling's intellectual development even after Hegel's death. To quote Hegel again: 'If we ask for a final work in which we shall find [Schelling's] philosophy represented with complete definiteness none such can be named.'[2]

Traditionally, Schelling's thought has been divided into five periods, with each period being seen as philosophically unique and even in tension with the others—although Schelling himself certainly never saw his work to be

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so discontinuous.[3] Recently, a number of commentators have followed Schelling's own understanding of his thought in arguing for its continuity from one period to the next.[4] On my view, however, this continuity is only made intelligible if one can provide an account of the apparent discontinuity of Schelling's thinking. I follow S.J. McGrath, therefore, in holding that Schelling's philosophical perspective is best understood *through* its development, as an evolution of a *way* of thinking.[5] This book focuses on the development of Schelling's thought from the late 1790s to the *Freedom* essay of 1809. My intention is not to exclude his earliest work or later thought from consideration—and, in fact, Schelling's later philosophy will prove to be especially important for arguments I make in Chapters 4 and 8. As I see it, however, the logic of Schelling's emergentism—i.e., the way he understands the ontological or structural dependence of spirit upon nature—is most clearly presented in the *Freedom* essay, and the logic presented in that essay can only be properly grasped if it is seen to continue and transform a way of thinking that was begun in the early philosophy of nature.[6] It is for this reason that I begin with Schelling's early philosophy of nature, or what he also calls 'speculative physics'.

Schelling published his first work of philosophy of nature, *Ideas for a Philosophy of Nature*, in 1797, followed by *On the World-Soul* in 1798. The latter work greatly impressed Goethe, who was instrumental in the arrangement of Schelling's appointment as professor in Jena. This gave Schelling the opportunity to lecture on the philosophy of nature in one of the more exciting intellectual environments of the time—and undoubtedly the most exciting environment for those sympathetic to idealist and romantic thought. The third major work of this period, *The First Outline of a System of the Philosophy of Nature*, was published in 1799 as an outline for Schelling's lecture course. Although it was not reissued in the 1800s as were the *Ideas* and *On the World-Soul*, the *First Outline* is an equally important text, thanks in large part to its significant *Introduction*, in which Schelling spells out in no uncertain terms that the philosophy of nature is an independent branch of philosophical science, one that is distinct from transcendental philosophy. In 1800, Schelling published his *System of Transcendental Idealism*, which does not belong to this independent branch of the philosophy of nature; its publication was immediately followed by the publication of the *General Deduction of the Dynamic Process*, a work that has unfortunately received far less attention than the *System of Transcendental Idealism*, presumably due to the latter's superficial similarities to Hegel's *Phenomenology of Spirit*. Finally, in January of 1801, Schelling published a response to Eschenmayer's critique of the *First Outline* under the title: *On the True Concept of the Philosophy of Nature and the Correct Way of Solving its Problems*.

Taken together, these texts constitute the core of Schelling's early philosophy of nature, and they lay the groundwork for Schelling's system of identity and *Freedom* essay, which were themselves devoted in large part to nature-philosophical themes. The evolving character of Schelling's thought, however, even makes focusing upon the nature-philosophical texts of 1797–1801 a difficult task. For even if we limit ourselves to this period in Schelling's development, there appear to be major inconsistencies in the aims, scope, and method of the philosophy of nature.[7] Many of these inconsistencies can be interpreted in light of Schelling's gradual disentanglement from a subject-centred idealism—in which knowledge of nature is based upon a more basic account of the mind—and his subsequent promotion of an 'absolute idealism', which is not (human-) subject-centred at all but is, on the contrary, 'absolute' on account of its consideration of the ideal or rational forms that exist within nature itself, barring any reference to the structure of consciousness or the way nature is given to the mind. Extricating himself from the transcendental perspective and initiating a novel form of idealism simply did not happen in one fell swoop. Thus, as Hegel notes, it is only through a 'gradual process … that Schelling raised himself above the Fichtean principle' and thereby began to defend a version of idealism that is as concerned with the structure of the natural world as it is with human activity.[8] Consequently, as Robert F. Brown writes: 'Schelling's recognition of the genuine independence of the object [i.e., nature] comes gradually, as the successive essays on the philosophy of nature move further away from the transcendental perspective.'[9] Pinpointing Schelling's precise break with 'subjective idealism' is therefore a difficult task, and it is not one I propose to accomplish here. Instead, I will attempt to describe a general movement of thought at work within this stage of Schelling's development, with an eye towards clarifying the non-subjective ontology of nature as it is presented in the *Introduction to the Outline*, the *General Deduction of the Dynamic Process*, and *On the True Concept of the Philosophy of Nature*, all of which express what I take to be Schelling's more sophisticated views regarding the nature of the philosophy of nature.[10] This does not, however, preclude us from drawing upon the *Ideas*, *On the World-Soul*, or the main text of the *First Outline*, since Schelling continues to stand by these texts as containing fundamental nature-philosophical insights, even if the framework within which these insights are found remains relatively 'subjectivist' or 'transcendental'.

My reconstruction of Schelling's early philosophy of nature also draws heavily upon the texts of the so-called 'system of identity'. As I have argued elsewhere with Daniel Whistler, although there are certain ways that Schelling's thought does shift in 1801, the system of identity should be read as a continuation of his earlier, nature-philosophical project.[11] In fact, some of Schelling's most detailed accounts of nature are found in

the texts of this period, such as the 1801 *Presentation of My System of Philosophy*, the 1802 *Bruno* and *Further Presentations from the System of Philosophy*, and the posthumously published 1804 *System of the Entire Philosophy and the Philosophy of Nature in Particular*. Therefore, rather than limiting my interpretation of Schelling's early philosophy of nature to those texts published prior to the 1801 *Presentation*, I refer to texts from 1797 to 1804 as comprising the early philosophy of nature.

In this chapter and the one that follows, I reconstruct Schelling's early nature-philosophical perspective with the aims of (i) elucidating what exactly idealist philosophy of nature or speculative physics *is* and (ii) homing in on Schelling's logic of emergence in order to trace what he sees as the ontological development that begins with inorganic forces and culminates in the theoretical activity of the human organism. In order to accomplish these goals, it will be helpful to begin with the way Schelling sees himself to be pursuing an ontology of nature after Kant's critical turn.

## Speculative Physics after Transcendental Idealism

Schelling's relationship to Kant is extraordinarily complicated, and I will not get into those details here. For the purposes of this study, it is necessary to simply unpack the idea that Schelling's philosophy of nature is, on the one hand, an explicit rejection of the epistemological limits set up by Kant's system, and, on the other hand, a project pursued by reconfiguring the subject-object relation as it is understood in the critical philosophy.

The first point, namely, Schelling's distance from Kant's epistemological 'humility', cannot be overstated. Schelling's philosophy of nature is a rationalist *ontology* of nature, and it therefore seeks to uncover the necessary, rational structure of nature itself, without reference to any empirical or transcendental subjectivity. Although he never rejects the transcendental project *tout court*, he comes to see its treatment of nature as superficial, for it only ever describes nature as a domain of possible *experience*, i.e., as it must be in order to be given to a *mind*.[12] Indeed, from a certain perspective, Schelling's philosophy of nature seeks to reverse the Copernican turn, so that philosophy might once again 'find out something about [objects] *a priori* through concepts that would extend our cognition', rather than remaining within the structure of the mind and settling for knowledge regarding how 'objects must conform to our cognition'.[13] The aim of Schelling's philosophy of nature is therefore neither to provide a transcendental grounding for the physical sciences, as Kant seeks to do in the *Metaphysical Foundations*, nor is it to work out the regulative ideas that allow the subject to conceive of organic life as if it were intrinsically purposive, as Kant seeks to do in the third *Critique*. As we will

see below, these texts are certainly important for particular developments within Schelling's speculative physics, but the project of speculative physics itself has very little in common with Kant's critical philosophy of nature.[14] Indeed, from a Schellingian perspective—and this is a point Hegel takes up without qualification—Kant's philosophical engagement with nature is fundamentally flawed insofar as it is exclusively concerned with how nature conforms to distinctively human forms of intuition.[15] It is for this reason that, when Schelling is distinguishing his project from the idealism of his immediate predecessors, he often refers to the ancient Greeks as inspirational,[16] and that, with regard to modernity, Spinoza and Leibniz appear as interlocutors throughout Schelling's philosophy of nature. Indeed, when it comes to inquiring into the *being* of nature, Plato, Spinoza, and Leibniz all outstrip the standpoint of Kantian idealism.

And yet, despite his determination to reinvigorate the philosophical study of nature by considering the natural world as it is in itself, Schelling never proposes to simply 'return' to pre-critical metaphysics. Kantian idealism remains central, for Schelling, not simply because he draws upon Kant's dynamic construction of matter and Kant's conception of life in his own philosophy of nature, but more importantly, because Schelling thinks there is something *right* about Kant's insistence that human subjectivity is intimately connected to the objective, natural world. It is therefore important to understand the extent to which Schelling's philosophy of nature, while reminiscent in important ways of pre-Kantian metaphysics, nevertheless remains post-Kantian in certain respects.

According to Schelling, Kant rightly articulated how an *objective* nature is a 'nature' only insofar as it conforms to the categories of the subject—not, of course, a particular, empirical subject but rational subjectivity *as such*. Kant also saw how this subjectivity is 'subjective' only insofar as it makes objective experience possible, as the conditioning, categorial matrix of objective phenomena. Schelling calls into question this reduction of nature's being to mere objectivity (a reduction that reaches new heights in Fichte's conception of nature as the 'not-I' posited by the 'I'), but the way he ultimately *avoids* this reductive view of nature largely depends upon an idealist framework. Kant's revolution in thinking makes explicit that objectivity and subjectivity are not simply 'other' than one another; they are intrinsically connected. What Schelling takes away from Kantian idealism, then, is that to understand nature properly requires us to conceive of nature as the 'objective' side of a unity (*Einheit*) or 'identity' (*Identität*) between subject and object. Indeed, the key to Schelling's Kantianism turns on his understanding of the connection between 'subject' and 'object'. There are three major ways that Schelling thinks about the subject-object relation, and each of these corresponds to a different philosophical perspective.[17]

### *I Transcendental Idealism*

Schelling's most traditionally idealist perspective is transcendental, and it involves a conception of natural objectivity as conditioned by the structure of the mind or consciousness conceived of as 'subject'. Schelling develops his most detailed account of this subject-object relation in the 1800 *System of Transcendental Idealism*. According to Schelling, transcendental idealism is a 'system of all knowledge',[18] and because it 'has to explain how knowledge as such is possible', it unsurprisingly takes the 'subjective element', i.e., consciousness, as 'primary'.[19] Schelling is explicit about the fact that he is involved in a Fichtean project in seeking to understand how a subjective mind comes to be unified with the object of knowledge through its own activity.[20] Indeed, although he certainly has distinctive contributions to make to transcendental idealism, his thoughts regarding the subject-object relation in this field are generally in line with Kant and Fichte. And like Kant and Fichte, Schelling sees nature as it exists *in itself* as philosophically irrelevant for the transcendental project; from the transcendental perspective, the natural object is that which is *known*, i.e., intuited and presented before the mind. This form of philosophy discovers the original unity of subject and object by attending to *self-consciousness*, in which the subjective activity of knowing and the being of the object known coincide.[21]

### *II Philosophy of Nature*

Although he published his *System of Transcendental Idealism* in 1800, Schelling's energy during the late 1790s and early 1800s was largely spent *breaking* with the narrow transcendental-idealist conception of the subject-object relation. His novel move after Kant and Fichte is to turn his attention to the natural ground of consciousness. Rather than asking what makes things in nature possible objects of empirical knowledge, Schelling seeks to understand what *nature itself* makes possible. This shifts the philosopher's perspective from one that seeks to understand how it is that we ever come to have an understanding of the world to a perspective that simply seeks to understand the world.[22] As Schelling somewhat polemically puts it, transcendental idealism 'is not philosophy itself, but philosophy *about* philosophy'.[23] He therefore encourages 'those who value knowledge over everything else' to 'come to physics and recognise the truth!'[24] The consequence of this change in perspective is that, rather than conceiving the subject-object relation from the perspective of consciousness, the relationship between subject and object is pursued from the objective, i.e., natural, side of the equation. Thus, Schelling asks: how does nature (generally understood by the modern tradition to be the realm of 'objectivity')

produce consciousness or spirit (generally understood by the modern tradition in terms of 'subjectivity')? For it is not only the case that, as Fichte argues, the object is posited by the subject (i.e., the self);[25] at a more fundamental level, it is *nature* that generates *consciousness* (a consciousness that can subsequently cognise the nature it takes to be other than it). We should not, then, be satisfied with a philosophy that only moves 'from us to nature', but we must also move 'from nature to us', and this means that we must philosophise from the perspective of the object.[26] Moreover, in considering which of the two forms of philosophy has systematic priority, Schelling claims that it is 'without a doubt, philosophy of nature, because it lets the standpoint of idealism itself first come into being'.[27] It should come as no surprise, then, that while Schelling's transcendental idealism is largely of a piece with Fichte's *Wissenschaftslehre*, the very project of the philosophy of nature became the source of their bitter dispute over the future of idealism. By seeking to identify the rational process through which nature raises itself to consciousness—by 'let[ting] the subjective emerge from the objective'[28]—Schelling's philosophy of nature is, as Beiser remarks, 'Fichte standing on his head'.[29] For Schelling, the 'objective' grounds the 'subjective' and, consequently, makes possible any epistemic unity of subject and object that is achieved by self-consciousness and comprehended in transcendental philosophy.

### *III Absolute Idealism*

But this is not the end of the story. In order to properly understand consciousness as something that is produced *by nature*, Schelling argues that we must conceive of nature itself as, in some sense, 'subjective'. It simply does not work, on Schelling's view, to imagine that a world of mere *things* generates the kind of autonomous and rational self-determination characteristic of spiritual or human life. Schelling therefore develops a third way to think about the subject-object relation, one that is made fully explicit in the 1801 *Presentation*. On this model, the *absolute identity* of subject and object is *all that there is*: 'we never leave the form of subjectivity–objectivity.'[30] Thus everything that is, according to Schelling, involves some element of 'subjectivity' and some element of 'objectivity'. The difference between nature and spirit, then, cannot be understood in terms of the difference between the objective world and subjective activity in any simplistic way; the difference between nature and spirit, rather, concerns that between an ontological preponderance of *objectivity* (nature) and an ontological preponderance of *subjectivity* (spirit), such that nature is seen to have *more* objectivity than subjectivity in it and spirit is seen to have more *subjectivity* than objectivity in it. I explore this idea in more detail below, but at this stage, the following is essential: for Schelling,

nature *is not merely* objective, but also *subjective*, and nature's *subjectivity* is what makes possible the emergence of spirit from nature. This is why Schelling can state that 'the philosophy of nature … *is* absolute idealism.'[31] To conceive of spirit as emergent from nature—as the philosophy of nature does—requires that nature itself be understood as, in certain respects, 'subjective'. For Schelling, it is accurate to understand nature as 'subjective', because it is not essentially an objective *thing* but a rational, self-determining, and productive *activity*. The remainder of this chapter explores the significance and implications of Schelling's idea that nature is 'subjective' in this sense.

## Nature as Impersonal Subject

From a Schellingian perspective, transcendental philosophy places limits on our knowledge of nature because it determines nature as exclusively objective, i.e., as a domain of things that stand over and against a subject, a domain of things that are *given*, at least in principle, to an 'I'. On the Kantian view, any discussion of cognising nature 'in itself' simply misunderstands the being of nature, which is precisely the objective realm of possible experience. It follows that, on the Kantian conception of nature, we can only know nature as it conforms to the categories of the understanding and the forms of intuition not because *we* are limited in our rational capacities—as if a being with more cognitive power could comprehend the structure of nature in itself—but because nature *just is* this objective field of givenness. In other words, underlying Kant's apparent epistemological humility is an implicit ontological claim regarding nature, i.e., that nature is a strictly objective being entirely dependent upon the categories and the human forms of intuition for it to be a nature at all. According to Schelling, then, Kant makes explicit the dominant assumption running throughout so much of the modern period, namely, that nature is ontologically derivative and therefore dependent upon something *other* than it.[32] So long as nature is understood as exclusively 'objective', it will always be conceived of as being set over against or posited by a subjectivity external to and more fundamental than it.

Schelling's philosophy of nature is premised upon the rejection of this modern assumption. For Schelling, nature can only be properly understood—and the relationship between nature and spirit can only be properly grasped—if the philosopher considers nature to have a reality of its own, a reality that is not bestowed upon it by something else. In other words, the philosopher of nature must work out how it is that nature *is* without appeal to any extra-natural substance or activity. And this is why, Schelling argues, the philosophy of nature must put into question the presupposition that nature is a merely 'objective' reality, i.e., a realm of being

set over against a subjectivity which it is not. Rather than rejecting the modern idealist framework entirely, however, he employs this framework in order to reimagine what a philosophical comprehension of nature's reality might be. In the *First Outline*, Schelling begins by adopting the transcendental-idealist conception of the activity of the 'I' and considers whether nature might also be defined in terms of activity.[33] It is not easy to think about nature this way: 'To philosophise about nature means … to tear yourself away from the common view which discerns in nature only what "happens"—and which, at most, views the act as a *factum*, not the action itself in its acting.'[34] But if one wishes to understand nature in any way beyond one's experience of it as a 'thing' standing over against oneself, then one must be willing to entertain the possibility that nature is immanently active.[35] More specifically, Schelling argues, nature should be understood to involve *creativity*, *autonomy*, and *autarchy*: its activity is expressed in the production of determinate natural *products*;[36] it gives *itself* the *laws* according to which it acts;[37] and all occurrences *in* nature result from its *own* activity.[38] On this view, nature is not, at bottom, a merely objective thing, but a self-determining activity in which things *come to be*, i.e., the process in which natural objects are generated, grow, and develop. As Pierre Hadot remarks, by conceiving of nature as the 'coming-into-being' of beings, Schelling rediscovers the 'ancient meaning of *phusis*, that is, of productivity and spontaneous blossoming.'[39]

In order to see the extent to which Schelling breaks with the dominant modern European conception of nature, it is helpful to reiterate that this productive activity does not come to nature from without; it is not granted to nature by a transcendent divinity or a transcendental subject, but is intrinsic to nature itself as its immanent, self-determining productivity. And yet, in order to arrive at the view that nature is, at bottom, not a *thing* but a generative activity of becoming, Schelling does not simply return to a Greek conception of nature—nor does he simply return to Spinoza's conception of *natura naturans* (although this, too, is deeply important for him). In addition to drawing upon these ancient and early modern sources, he attributes the transcendental-idealist conception of the *subject* to nature itself.[40] The concept of subjectivity at work in Kantian idealism thus provides Schelling with the occasion to conceive of nature as immanently active. As he puts it in a note to the *First Outline*, 'The philosopher of nature treats nature as the transcendental philosopher treats the self … This is not possible, however, if we proceed from objective being in nature.'[41] In noting the manner in which Schelling employs the Kantian conception of the subject in the philosophy of nature, we should also note that, for Schelling, the subjective activity in nature is radically non-personal, even more so than the transcendental subject of the critical philosophy. For nature's subjective activity is not structured in such

a manner as to coincide with an anthropological character, as is Kant's transcendental subject, with its cognitive, conative, and affective faculties. The primordial subjectivity described in Schelling's system is in no sense human: it is *unaware* of its productive activity, incapable of reflecting back upon itself in any manner (e.g., through sensation or thought) and does not consciously affirm that at which it aims in action. The productive activity of nature thus has little in common with any form of consciousness—or even non-conscious forms of life that act on the basis of sense-perceptions. This is how Schelling's transposition of the modern conception of the autonomous subject into nature allows him to conceive of nature, along with the ancient Greeks, as a cosmological process of 'becoming'.

This is not to say that the phenomena encountered in the natural world lack objective reality on Schelling's view. On the contrary, because nature is *productive*, it must actually engender natural *products*. As Schelling most clearly articulates it in the *First Outline*, its *Introduction*, and the 1804 *System*, nature must therefore be understood in terms of both productivity (*natura naturans*) and the natural products of that productivity (*natura naturata*).[42] The subjective aspect of nature is therefore, like Kant's transcendental subject, the condition for the possibility of objectivity; it grounds the natural phenomena we encounter in the world, from inorganic bodies to plants and animals.[43] Nature, for Schelling, is thus both subjective and objective—subjective insofar as it is an infinite *activity*, objective insofar as this activity produces determinate, spatiotemporal *beings* that are themselves *nature*. It can be tempting to interpret this as suggesting that we are really dealing with two different things or two orders of nature: a productive order and an order of natural products. But Schelling understands *natura naturans*—or nature's subjectivity—to be exhibited *within* each and every product: 'every individual is, as it were, a particular expression of it.'[44] Since nature is intrinsically both productivity and product, the determinacy of objects is not owed to their conforming to categories and forms of intuition extrinsic to them, but rather to the natural activity of which they are immanent expressions. The apparent 'doubleness' of nature, therefore—i.e., the fact that nature is both 'subjective' and 'objective'—is not a 'dualism' lacking unity; nature is a 'one', the activity of which necessitates that it be expressed as an objective, determinate reality.[45]

Because Schelling attributes subjectivity to nature, it can also be tempting to read him as advocating for the idea that nature is in some sense person-like or 'spiritual'. Schelling himself appears to invite this interpretation—particularly in some of the texts of the early 1800s—when he insists upon the identity of thought and being. After all, if Schelling understands *being* as *thought*, does this not imply that all natural phenomena are in some important sense *thinking* beings? This is to deeply misunderstand Schelling, but there is no question that, on a superficial reading, he seems

to understand the impersonal, subjective dimension of nature as not only generative *of* spirit, but as *itself* spiritual or at least quasi-spiritual. Indeed, at times, Schelling explicitly states that nature is the 'real' manifestation or 'visible' expression of spirit. The passage that most clearly articulates this conception of nature as spiritual—and one that is often cited as central to Schelling's distinctive philosophical vision—is found in the Introduction to the *Ideas*, where Schelling describes the 'absolute identity' of nature and spirit as follows: 'Nature should be spirit made visible, spirit the invisible nature.'[46] From this perspective, it looks as though nature is not so different from spirit, indeed, that nature *is* spirit, but spirit that appears in space and time. It would be mistaken, however, to interpret Schelling along these lines. There are two main reasons that this interpretation is misleading.

First and foremost, to conceive of the subjectivity in nature as in any sense spiritual is to downplay the ontological specificity of both nature and spirit. Indeed, the difference between nature and spirit is crucial for Schelling, and the structural emergence he attempts to describe in the philosophy of nature is unintelligible if we read nature as nothing more than spirit that can be sensed. As we will see in Chapter 3, spirit is, for Schelling, a conscious form of being capable of thought and moral action; nothing like this takes place in nature, and this is why the emergence of spirit from nature calls for a systematic distinction between the philosophy of nature, on the one hand, and the philosophy of spirit or the philosophy of the 'ideal world', on the other.[47] Ordinary cognitive acts, forms of political association, aesthetic experience—these are not *natural* (even if they are dependent upon nature). Whenever Schelling states that spirit is invisible nature or that nature is visible spirit, he diverts attention from one of his fundamental and more compelling philosophical commitments: that nature and spirit each have an ontological integrity that reductive naturalists and reductive spiritualists equally fail to acknowledge.

Schelling's comments about nature involving not only a subjective but also spiritual core can be misleading in a second way that is closely related to the first. Once we lose sight of Schelling's commitment to the ontological specificity of nature and spirit, it takes only a small step to overlook his claims regarding the ontological priority of nature. Indeed, if 'nature in itself, or eternal nature, is just spirit born into objectivity',[48] if 'nature is only intelligence congealed into a being',[49] then surely it becomes difficult to understand how spirit emerges from nature. Thus, as with the point about ontological specificity, Schelling himself is largely responsible for confusing his readers about the nature-spirit relationship and whether one of the two has ontological priority. During the early 1800s in particular—the most Spinozist phase of his philosophical development—Schelling seems to argue that nature and spirit are primordially identical, suggesting

not only that nature and spirit lack determinate difference, but that one could not possibly emerge from the other. Since I am arguing that Schelling is deeply committed to a logic of emergence, it is worth considering his apparent conception of the 'primordial identity' of nature and spirit.

It is true that, in the early 1800s, Schelling further elaborates upon his conception of the 'absolute identity of spirit *in us* and nature *outside us*'.[50] In the Introduction to the *System of Transcendental Idealism*, for instance, he claims that 'all knowledge is founded upon the coincidence [*Übereinstimmung*] of an objective with a subjective' and that the objective is nothing other than nature, while the subjective is 'the self, or the intelligence'.[51] And since the entire metaphysical edifice Schelling constructs in 1801 involves the idea that subjectivity and objectivity only *are* insofar as they are fundamentally *identical*,[52] it is not difficult to imagine why one might interpret him as suggesting that nature and spirit *coincide*, that nature and spirit are not, in essence, *different* from one another—and that, consequently, the latter cannot emerge from the former as ontologically distinct.

Yet Schelling does not understand the nature-spirit relation to be reducible to the relationship between object and subject; and so, while it is true that he argues for the primordial identity of objectivity and subjectivity, he does not, ultimately, hold the view that nature and spirit are primordially identical. From a certain perspective, nature and spirit are certainly 'identical' for Schelling, and I will explore his developing logic of identity in more detail in Chapter 3. At this stage, what is necessary to emphasise is that, for Schelling, nature and spirit are *each* understood to be expressions of subject-object identity but different *versions of* that identity: whereas nature is an *objective* expression of subject-object identity, spirit is a *subjective* expression of subject-object identity. And, according to Schelling, the task of the philosophy of nature is to trace the manner in which the 'subjective subject-object' emerges from the 'objective subject-object'.[53] Nature, then, is in no way *spiritual*; it can be seen as the 'inverted' form of spirit only because it involves a preponderance of objective being, while spirit involves a preponderance of subjective activity.[54]

In what sense, then, are nature and spirit 'primordially identical' according to Schelling's absolute-idealist perspective? In that nature and spirit are both expressions of *subject-object identity*, i.e., in that both nature and spirit involve subjective and objective features. Yet importantly it is the *objective* subject-object identity—i.e., nature—that is *first* in the order of being, and it is *subjective* subject-object identity—i.e., spirit—that is ontologically *derivative*. This is why, after working out the basic metaphysics of the system of identity in §§ 1–49 of the *Presentation*, Schelling goes on to describe his philosophy of nature (§§ 50–159) (and abruptly concludes the work before going on to consider consciousness

in any detail). The philosophy of nature is given priority in the system because subjectivity only *gradually* gains preponderance over objectivity and becomes properly *spiritual* in the human being, a form of existence that is not natural (i.e., not an objective subject-object identity).

It should therefore be clear that Schelling's attribution of subjectivity to nature in no way contradicts the idea that nature is the non-spiritual activity productive of the human spirit as an ontologically distinct form of existence. On the contrary, it is by recognising something subjective in nature that Schelling accounts for the production of spirit. From this perspective, the idea that there is subjectivity in nature is not nearly as strange as it first appears (although it is certainly heretical when compared to traditional theological conceptions of nature as the creation of a transcendent person). For Schelling, nature involves 'subjectivity' in the sense that it is an *agent*, i.e., a source of *action*: nature *does* things, and—as we will see below—it does things *for reasons*. If we ignore this fundamental *activity* in nature, then we will always fall back on explaining natural phenomena in terms of a transcendent power—be it the power of the human mind to organise what is given in space and time such that it is made intelligible, or the power of a creator God. The idea that nature is, from a certain perspective, 'subjective', is just Schelling's way of saying that nature is immanently active, prior to any spiritual activity (human or divine); it is to use the language of transcendental idealism against idealist and theological orthodoxy.

## Reason in Nature

The notion that nature involves an essentially self-determining, productive activity does not exhaust the manner in which nature is 'subjective' for Schelling. Whereas Kant assumes that the forms of space and time are utterly distinct from reason, Schelling understands the spatiotemporal world to be immanently rational. And the immanent rationality of the spatiotemporal world signals, for Schelling, another sense in which nature is 'subjective'. Yet again, Schelling goes 'beyond' Kant by transposing defining features of transcendental subjectivity into nature itself. The transcendental idealist is *right* to understand subjectivity in terms of *rational self-determination*, but she fails to recognise that this rational self-determination characterises nature as well as mind.

One way to see this is to note that the identity of subjectivity and objectivity expressed objectively in nature and subjectively in spirit is, according to Schelling, *reason* in both instances: 'I call *reason* absolute reason, or reason insofar as it is conceived as the total indifference of the subjective and objective.'[55] To say that nature—the objective subject-object—is an expression or manifestation of reason is not to say that it is something that

is merely thought by a *mind*; on the contrary, 'reason', for Schelling, is more fundamental than any individual mind, and, in fact, it exists first and foremost in *physical* form, i.e., as a natural world. As Naomi Fisher puts it, 'the original home of rationality is nature.'[56] This is why Schelling can state that 'rational beings are limited appearances of *absolute* reason':[57] reason is far more than its appearance in the human mind, even if the human mind expresses reason in a reflective, conscious mode.

Another way to think about Schelling's understanding of nature as rational is to note that, following Kant, all of the post-Kantian idealists understand self-determination to be rational. According to Kant, positive freedom is self-determination in the form of rational self-legislation; one is free in the positive sense when one acts on the basis of universal, rational principles that one *gives oneself*, thus demonstrating that one's activity is motivated by principles that are immanent to the mind.[58] Schelling takes off from here. Unlike the human being, nature is not aware of its reasons for acting; it acts with 'blind necessity'. Yet the necessity with which nature acts can nevertheless be called free, since nature gives itself the laws according to which it acts.[59] And note that, from an idealist perspective, none of this depends upon whether or not the laws determining nature's activity could have been otherwise; it is the *immanence* of the law that secures the freedom of nature, just as it is the immanence of the law—rather than the possibility of acting otherwise—that signals the freedom of the moral agent for Kant. Nature is rational, then, simply because it is self-determining. Consequently, when Schelling argues that nature is active, he is not just saying that 'things happen' in nature or that natural beings come into existence because natural objects have causal powers; he is saying much more than this. The things produced in the natural world are produced according to something like a *plan*—a plan that nature gives itself and in fact could not have been other than it is. According to Schelling, that the natural world involves gravity, heat, magnetism, and so on *is no accident*. To be sure, if we focus exclusively on one of these natural phenomena, its rational necessity will be unapparent. But as soon as we take up a *philosophical* approach to natural phenomena and understand them in terms of the *whole* of nature and its *self-determining activity*, we put ourselves in a position to comprehend the *rational necessity* that connects these phenomena and organises them into a single system.[60]

Since nature is rationally structured, it is, at least in principle, fully intelligible. This does not mean that our knowledge of nature's rational structure should be derived without any reference to experience. To assume that knowledge of nature's rational structure implies turning a blind eye to experience is to misconstrue the meaning of a priori knowledge. According to Schelling, judgements about the structure of nature prove to be '*a priori* principles [only] when we become conscious of them as *necessary*':[61]

> Every judgment which is merely historical for me—i.e., a judgment of experience—becomes, notwithstanding, an *a priori* principle as soon as I arrive, whether directly or indirectly, at insight into its internal necessity … It is *not, therefore*, that WE KNOW *Nature* as *a priori*, but *Nature* IS *a priori*; that is, everything individual in it is predetermined by the whole or by the idea of Nature generally. But if Nature *is a priori*, then it must be possible to *recognize* it *as* something that is *a priori*.[62]

As Fisher clarifies, the meaning of 'a priori' here does not refer to our 'cognitive processes': 'Rather, since nature … operates according to necessary a priori principles, when we come to know those principles we also term them a priori.'[63] Importantly, then, experience might play a role in our becoming familiar with the goings-on of the natural world, such that we can subsequently grasp the rationally necessary relationships between various phenomena.

We might, then, think that the philosophy of nature is friendly to empiricism; but that would also be mistaken. Schelling understands experimentation to be an important part of knowledge acquisition. It provides us, for instance, with the opportunity to become acquainted with natural phenomena. But experimentation—and experience more generally—yields no knowledge regarding rational necessity as such. Something further is needed, then, for one to become aware of the rational principles that organise the natural world. And that something further is rational insight or intellectual intuition. Experience alone does not get us to properly philosophical knowledge regarding nature. What is more, there would *be* no experimentation without such rational insight leading the way.[64] In the *Introduction to the Outline*, Schelling claims that the idea motivating experimentation ought to be that nature is productive and that its productive activity is never exhausted.[65] By 1801, the rational principle posited by the philosophy of nature is the idea that subject-object identity lies at the heart of nature. In either case, empirical research must be motivated by a principle—a principle that is not merely formulated *by us* but one that is at work in nature itself, a principle that we 'see' in nature independently of perceptual experience. Even Schelling's comments that suggest he is some kind of fallibilist do not, in the end, turn the philosophy of nature into a programme that is friendlier to experience. While he notes that experimentation can be helpful in disabusing one of principles that are *mistaken* for being intrinsic to nature,[66] he doesn't imagine that his own conception of nature's a priori principles would ever be proven false on the basis of empirical research, because—unsurprisingly—he believes he is *right* about those principles.

Schelling thus takes himself to be engaged in a *philosophical* consideration of nature insofar as nature's general features are shown in his system

to be related in a rational manner. To achieve a philosophical comprehension of the diverse features of the natural world is not to simply understand *what there is*, but to understand *why* nature is what it is and why it does what it does. The philosopher of nature asks why the earth has magnetic poles, why certain forms of material organisation become sentient, and, ultimately, why human beings exist. While answering these questions may involve reference to experiential knowledge, experience does not itself provide answers to the speculative philosopher's questions. Such answers are only provided by reason.

Schellingian philosophy of nature is therefore an unapologetically rationalist programme—something that becomes more and more evident as he leaves behind the transcendental perspective and more fully embraces a Spinozist form of metaphysics in the early 1800s.[67] Indeed, the philosophy of nature in no way 'justifies an empirical realism'—as transcendental idealism does—'but rather … reduces the empirical realism founded upon the affections of the Ego … to nothing, and aims at what is "in-itself" or intelligible in nature.'[68] Because the philosophy of nature is philosophy, it is a 'purely rational science'.[69]

This is a point worth emphasising, since it has become something of a commonplace to see Schelling as being at the very least sympathetic to empiricism and opposed to strict rationalism if not outright 'irrationalist' in his philosophical tendencies, especially as he becomes increasingly interested, in his later thought, in the history of mythology and the possibility of developing a philosophical religion. In fact, it is often claimed that the essential difference between Schelling and Hegel has to do with the former's supposed rejection of Hegel's rationalism, a rejection that is said to become increasingly evident with the *Freedom* essay of 1809.[70] It is true that, by the 1830s, Schelling becomes fixated on the philosophical and theological significance of empirical contingency as that which is left out of a rationalist account of reality. But this should not overshadow the fact that even in his late philosophy, Schelling remains committed to the idea that philosophical science ought to present the ontologically necessary features of reality through a system of impersonal or cosmological *reason*. In the 1850 lecture *On the Source of the Eternal Truths*, for example, he holds that it is possible to derive the necessary existence of plant life from sheer reason, even if we can never guarantee that we have been successful in doing so (and even if we need to first become experientially acquainted with plant life for such derivation to be possible for us): 'A continuous progression is discoverable from the highest Idea of reason all the way down to the plant as a necessary moment of the same.'[71] What the late Schelling does call into question is his previously held conception of the rational ground that explains *why* being or reality is rationally structured. According to the late Schelling, only an act of

God, an act free from all rational and necessary determination, can speak to this 'why'. But it is important to acknowledge that, even at this late stage in his thought, where he enters into a consideration of the contingent ground of rational necessity, Schelling never questions the view held in his early philosophy of nature that the ontological gradations of nature are rationally necessitated—not from on high, but from within nature itself, as the unfolding of nature's immanent, structural sequence. On my understanding, Schelling never turns away from the idea that nature is intrinsically rational.

Alison Stone has helpfully pointed out that the early Schelling's conception of nature as 'productivity' is bound up with his conception of nature as a rational system.[72] As Stone argues, Schelling does not explain the productivity of nature in terms of an irrational will, as Schopenhauer does. Instead, Schelling conceives of the activity of nature—even when he begins to understand this activity as, indeed, one of 'willing'[73]—as a *rational* activity on the part of nature's subjectivity. For in idealist philosophy, 'subject' designates not only 'self-determining activity' as opposed to objective being, but an activity that is pursued rationally, i.e., an activity motivated by reason. To be sure, the rationality of nature remains a 'blind' rationality so long as it is non-conscious and non-reflective; natural productivity doesn't relate *to* itself through sensation or thought, and it doesn't make decisions about what products it engenders by reflecting upon its aims. Nevertheless, the manner in which nature generates products is rational and, indeed, teleological, since it follows a course that nature itself posits, a course leading from inorganic forces to magnetism, electricity, chemical processes, organic life, and, ultimately, human or spiritual existence. According to Schelling, this final stage of nature's development is unique in that its appearance within that development signals the need for a second branch of philosophical science, a philosophy of the 'ideal world' that will unpack the ontological structure of consciousness as a distinctive natural product capable of reflecting upon nature's own rational process. But prior to the emergence of consciousness at the end of the system of nature, the entire development of nature has already been *rational*—without any reference to conscious reflection or the way the human mind comes to experience the natural world. And that is true even if the philosopher of nature needs to have had some empirical familiarity with natural phenomena in order to subsequently grasp the strictly rational structure of nature.

At times, Schelling's rationalism leads him to argue that 'there is no chance in nature at all', since the *whole* of nature is a self-determining, rational system.[74] In this way, Schelling differs from Hegel, for whom nature is largely determined by chance. As I will discuss in Chapters 4 and 5 below, Hegel argues that the *being* of nature requires that it will involve an extraordinary amount of contingency, making it an impoverished

sphere of reason. From a Schellingian perspective, Hegel's conception of nature as rationally impoverished is unjustified, since nature is itself a *wholly* rational system. To be sure, nature becomes *more* rational as it organises itself in successively more subjective forms (e.g., as life and then as spiritual existence). But the most basic forms in nature are not constitutively *lacking* in rationality; they are not defined by ontological negativity. They are simply more basic expressions of reason.

One difficulty attending any comparison of Schelling and Hegel on the question of nature's rationality is that Hegel operates with a far more restricted conception of 'rational necessity' than Schelling does. As we will see in Part II of this book, for Hegel, certain natural processes and forms necessarily exist because they realise the implicit logical structure contained in more basic natural processes and forms. For example, implicit within the logic of the chemical process is the idea of a self that maintains its selfhood in losing itself. Because this idea is logically implicit in a natural process that has already proven to be real, Hegel argues, this idea must also be real. Thus, according to Hegel, the logic intrinsic to chemical processes necessitates that there be a form of selfhood that is achieved in the loss of self; this form of selfhood is life. On Hegel's view, then, life necessarily exists because it is logically implicit in the structure of the chemical process. (The details of this example are discussed in Chapter 7.) There is a great number of things in the natural world that cannot be accounted for according to such logical explication, and the existence of those things has nothing to do with reason or necessity on Hegel's view.

Whereas Hegel understands natural processes and forms to be rationally necessary only if they explicate or express what is logically implicit in more basic processes and forms, Schelling understands *everything* in nature to be rational *by definition*. According to Schelling, a feature of reality is 'rational' so long as it *is*, for 'outside reason is nothing, and in it is everything.'[75] All that is is rational, and were anything to *not* be rational, it could not *be*. In other words, nature cannot involve irrational elements, because non-reason *does not have being*, and only that which *is* can *be*. One consequence of Schelling's hyperrational Parmenideanism is that not only are general features of the natural world understood to be rationally necessitated, but the generation of individual beings must also proceed according to a rational process.[76] This way of seeing things is fundamentally different from Hegel's. As discussed in Part II of this book, the production of individual entities is rational, for Hegel, only insofar as the natural world must necessarily involve forms of individuality, the natural-historical production of which is contingently determined. *Pace* the limited rationalism of Hegel's philosophy of nature, Schelling argues that, because nature acts in accordance with its intrinsic rationality, 'everything that happens or arises is an expression of an eternal law.'[77] Even the production

of individual natural things, according to Schelling, is bound up with nature's rational necessity.[78]

With these remarks, it looks as though Schelling's philosophy of nature isn't so far from W.T. Krug's characterisation of it as the attempt to systematically derive the existence of individual, finite entities from sheer reason; and one might be tempted to ask, along with Krug, if the Schellingian programme indeed suggests the possibility of rationally deriving the existence of particular dogs and horses, a pen, or even the determinate personalities of Alexander the Great and Cicero.[79] But this would be to misunderstand Schelling's insistence upon the rational character of nature's productivity. Although any given natural product is, for Schelling, a rationally necessary part of nature, individual products are never the focus of speculative physics. On the contrary, the philosophy of nature 'aims generally at the inner motor and what is *non-objective* in nature',[80] and the natural products *of* this inner motor are only discussed in general terms, as products that result from—and are therefore expressions of—nature's rational, productive activity. The focus of speculative physics, in other words, is not on the 'products of nature but nature itself', i.e., the rational, self-determining activity that engenders determinate products.[81] According to Schelling, we grasp the *being* of nature not by concerning ourselves with the production of a particular geological feature or organism (despite the rational character of their generation), but by uncovering the necessary sequence of nature's general forms, forms of which particular entities are expressions.

Thus, although everything that comes to exist does so for a reason, the philosophy of nature will attend primarily to the most general forms or 'stages' of nature, and it will seek to elucidate the rational development that proceeds from the most basic and least subjective stages to the highest and most subjective stages. As Schelling puts it, 'the fundamental task of all nature-philosophy [is to] TO DERIVE THE DYNAMIC GRADUATED SEQUENCE OF STAGES [*STUFENFOLGE*] IN NATURE.'[82]

The idea of a 'sequence' or 'progression of stages in nature' suggests that Schelling is referring to a temporal process. He is not. Although nature is certainly productive from one moment in time to another—and although Schelling sometimes appears to be open to the idea that nature's stages emerge historically[83]—the progression he has in mind when describing nature as a *Stufenfolge* is a rational and atemporal progression. According to Schelling, there are rational connections between all of the general forms found in the natural world. These connections are 'dynamic' because the forms and their rational connections are not simply *there*, as merely static elements constituting the structure of pure reason, but *arise* according to reason's self-determining activity—and, as we have already seen, this is an activity that is immanent to nature. The philosopher of nature must

therefore attend to how the higher, more subjective forms of reality emerge or arise on the basis of those that are more basic. To comprehend the various stages of nature, one must consider the rational development from one to another.

It can be helpful to recall the idea that the philosophy of nature is analogous to an inversion of Fichtean idealism. Fichte does not propose that empirical consciousness actually posits the objective world as its other *in time*. Rather, transcendental subjectivity *just is* the activity of self-positing and self-limiting, the latter of which is the positing of a 'not-self' or nature.[84] It is in this sense that Fichte claims that critical philosophy is a '*genetic* deduction of what we find in our consciousness'.[85] He does not think that the empirical 'I' actually generates the objects it encounters; the philosopher must trace the fact of worldy existence back to its necessary conditions and thereby genetically construct—in philosophical science—the path that leads from those transcendental conditions to empirical reality, demonstrating the rational ground of empirical life. In Schelling's early philosophy of nature, the account of the emergence of consciousness (as well as the account of the emergence of more basic forms of reality) is Fichtean in this formal sense. Both philosophers are concerned with ahistorical, rational connections that are explained genetically, such that basic principles of intelligibility allow one to construct, step by step, a more sophisticated story about reality. Schelling simply moves in the other direction from Fichte, in an effort to identify the rationale that proceeds from *there being a nature* to there being matter, magnetism, electricity, and so on, until nature proves to necessarily involve human existence. Thus, although the Schellingian conception of nature as *Stufenfolge* looks similar to and in many ways is compatible with post-Darwinian conceptions of natural development—at least with respect to the idea that natural forms emerge in time and that more complex forms emerge from less complex forms—the type of philosophical explanation Schelling is providing in the early philosophy of nature is far more traditional. The story he tells about nature's development from matter to spirit is not a historical account of natural transformations that took place before our time.

That being said, it should not go unremarked upon that Schelling does conceive of nature as productive in time and that he does express an interest in the idea that the *Stufenfolge may* be a historical progression. Indeed, despite his commitment to providing an ahistorical account of nature's total organisation, Schelling also emphasises *production* and *creation* as essential to the very project of the philosophy of nature.[86] As I argue in Chapter 8 below, this also sets Schelling apart from Hegel, and it suggests that the early Schelling was already on his way to conceiving the organisation of nature as essentially historical—a position that becomes most explicit in his *Ages of the World*. But in the early work, Schelling does not

'temporalise the great chain of being' in any straightforward sense;[87] in fact, he states in no uncertain terms that nature does not have a history.[88]

Schelling's *On the World-Soul* is his first work to thematise the ahistorical, rational connections between nature's general stages, from matter and light to heat, air, electricity, magnetic polarity, and finally to the organic processes, which define plant and animal life. Indeed, it is in this work that Schelling first conceives of nature as one total organisation in relation to which every feature of the natural world is intelligible. But it is with the *Introduction to the Outline* and the *General Deduction* that Schelling settles upon the conceptual apparatus he uses to explain the connections between the various features of nature. From this point on, Schelling's philosophy of nature is a philosophy of 'powers' or 'potencies' (*Potenzen*)—a mathematical term taken over from Eschenmayer's philosophy of nature but put to a very different use by Schelling.[89] The mathematical origin of the term is important to keep in mind, in part, because doing so discourages misinterpreting Schellingian *Potenz* as Aristotelian *dynamis*. It is not until Schelling's late thought that the term 'potency' comes to signify a *potential* to be; in his early philosophy, the potencies simply *are*, without any question as to whether they will be made actual—all powers are necessarily manifest. The mathematical origin of Schelling's concept is also significant insofar as it speaks to his interest in developing a language for describing the various stages of nature as intrinsically connected. The comparison with Aristotelian physics can again be helpful: Schelling does not understand the potencies as the capacities of various things having no relationship to one another, such as the power of a glass to break and of a seed to become a tree. For Schelling, the potencies are intrinsically related as the most general features of one and the same reality, namely, nature as a whole. More specifically, each general feature of nature is understood to be connected to every other feature in the sense that *all* of them are expressions of reason at different levels of intensity.[90]

Importantly, the connections between the stages of nature are not fully understood if one focuses exclusively upon the fact that reason is exhibited in each stage. That the stages of nature exhibit nature's rationality at different levels of intensity also means that the higher stages of nature—i.e., the more intensively rational features of nature—should be understood as elevated forms of the more basic stages. Consequently, the connections between the potencies are not static connections but processual in the sense that the higher stages emerge from the lower in a process of nature's immanent differentiation. For example, within the domain of strictly inorganic nature, there is an immanent development from gravity, which Schelling identifies with the 'first potency', to chemical process, which he identifies with the 'second potency' or gravity raised to the second power.[91] The development that leads from the first to second potency is

one of 'potentiation' (*Potenzierung*), because (i) it is the *intensification* of what is active in the first potency, and (ii) this intensification does not depend upon anything external to the first potency but simply involves the duplication of the first potency with *itself*. Again, Schelling does not see this as a historical process. This is why, during the early 1800s, he even downplays the *developmental* character of the relationship between the various stages of nature, arguing that the 'potencies must be viewed, not as successive, but in their simultaneity [*Zugleichseyn*].'[92] As I see it, Schelling can claim that the potencies coincide, because their relationship, i.e., the development from first to second to third potency, is not historical but rational: the chemical process emerges from gravity in the sense that the chemical process (in which one body relates to a second in a particular way on account of their specific constitution) is a version of gravity (in which one body freely falls towards another), and this 'chemical' version of gravity is an 'intensification' of gravity proper, because it involves the 'subjective' element of gravity being brought to the fore. Likewise, the reproductive drive—in which an organism seeks its own being in the being of another organism—is gravity raised to the third power, because it further intensifies the logic of gravitational motion, and specifically the subjective element therein. In both cases, the intensification of subjectivity is rationally required, because reason must express itself fully. (Chapter 2 below considers all of this in greater detail.)

In *On the True Concept*, Schelling recommends the employment of a profoundly idiosyncratic method for understanding the rational movement at work from one potency to another. According to this text, the philosopher of nature must abstract from the higher potencies of nature—life and consciousness—and sink into the lowest levels of materiality—the inorganic, impersonal basis of life and consciousness. Schelling calls this method of abstracting from the 'I' 'depotentation', a process whereby the philosopher descends from the height nature has achieved in humanity and plunges into the inorganic depths from which consciousness emerged.[93] From the 'depotentiated' standpoint, then, the philosopher—no longer 'conscious' in the technical sense—can let *nature*'s activity of potentiation unfold in thought. In temporarily putting the limited perspective of ordinary consciousness out of play, the philosopher can take on the perspective of reason *as such* and move through nature's immanent development, from its forces (repulsion, attraction, and gravity) to the categories of physics (magnetism, electricity, and chemical process) and the activities of life (sensibility, irritability, and formative drive) before finally returning to consciousness as if awaking from sleep.

Schelling does not advance the method of depotentiation throughout all of his nature-philosophical texts, but it is of a piece with his abiding commitment to developing a rationalist ontology of nature in which

consciousness is shown to emerge from nature's non-conscious yet rational existence. Central to this form of philosophising is the ability to take up a perspective that is not the perspective of the 'I'.[94] But, importantly, such depotentiation—descending from consciousness to more basic levels of reality—is only possible because there is ontological continuity between the 'I' and that upon which it is based. Since depotentiation is only possible on account of the ontological continuity between the various stages of nature, this method also highlights a key element of Schelling's metaphysics. We can comprehend the rational structure of nature because we ourselves are products of this rationality—products that are unique not only in our everyday awareness of ourselves and the world but also in our theoretical capacity to abstract from this everyday awareness, descend the potencies, and contemplate reason *as such*, the natural source of our existence. When put in these terms, it is clear why Schelling took Platonic *anamnesis* to be an apt analogy for nature-philosophical speculation:[95] this is a form of idealism that seeks to bring to mind our ontological familiarity with what is most fundamental, the rational forms that ground all that is.

From a certain perspective, then, speculative physics is a relatively traditional philosophical project that seeks to uncover the rational structure of the natural world. What makes the project distinctive, however, is that the entire sequence of stages that make up the natural world is only intelligible from the bottom up. The higher forms of nature and even the human spirit are shown to be ontologically dependent upon the lower forms of nature; they are lower forms 'raised to higher powers'. Thus, by shedding light upon nature's *Stufenfolge*, Schelling's philosophy of nature seeks to provide an explanation about how inorganic nature necessitates the existence of life and humanity. I consider the details of this rational series in the following chapter.

## Notes

1 *W* 20: 421; *Lectures on the History of Philosophy: Volume III*, p. 513.
2 *W* 20: 421; *Lectures on the History of Philosophy: Volume III*, p. 513.
3 These five periods are: (i) Schelling's early transcendental idealism (1794–1797); (ii) the philosophy of nature (1797–1800); (iii) the identity philosophy (1801–1805); (iv) the philosophy of freedom (1809–1815); and (v) the late philosophy of mythology and revelation (1820–1850). Although this periodisation is somewhat helpful, it can be quite misleading, even if one wants to emphasise, as I do, the differences between certain stages of Schelling's thought.
4 See, for example, Iain Hamilton Grant's influential reading of Schelling, which has served to not only popularise the notion that Schelling's thought is fundamentally continuous (*Philosophies of Nature After Schelling* [New York: Continuum International Publishing Group, 2008], pp. 3–6) but has also popularised Schelling's philosophy of nature by treating it as philosophically viable in the twenty-first century.

5 S. J. McGrath, *The Dark Ground of Spirit: Schelling and the Unconscious* (London: Routledge, 2012), pp. 2, 36.

6 By beginning this study of Schelling's thought with his philosophy of nature, I do not mean to imply that Schelling's work prior to 1797 is entirely separate from his early nature-philosophical project, its transformation in the system of identity, or its culmination in the essay on *Human Freedom*. On the contrary, even the texts that precede 1797 should be seen as continuous in important ways with Schelling's nature-philosophical vision. On this point, see Dalia Nassar, 'Pure versus Empirical Forms of Thought: Schelling's Critique of Kant's Categories and the Beginnings of Naturphilosophie', *Journal of the History of Philosophy* 52 (2014), pp. 113–134.

7 By rightly including the nature-philosophical works associated with the 'identity philosophy' as part of the evolution of the philosophy of nature, Joseph Esposito identifies 'at least six major reformulations of [Schelling's] system' during the early period. Joseph L. Esposito, *Schelling's Idealism and Philosophy of Nature* (Lewisburg: Bucknell University Press, 1977), p. 87.

8 *W* 20: 421; *Lectures on the History of Philosophy: Volume III*, p. 513. We therefore find Schelling, in the *Ideas* of 1797, focusing exclusively upon why the transcendental subject is 'compelled' to understand nature in particular ways, as Schelling continually qualifies his claims about reality, objectivity, and materiality as being 'for us'. See, for example, *SW* I/2: 29–30, 45; *Ideas for a Philosophy of Nature*, trans. Errol E. Harris and Peter Heath (Cambridge: Cambridge University Press, 1988), pp. 23, 34. By the time Schelling writes the *Introduction to the Outline*, he has clearly disentangled himself from this subjectivist standpoint, and his philosophy of nature is without a doubt an *ontology* of nature. See, for example, *SW* I/3: 273–274; *Introduction to the Outline*, trans. Keith R. Peterson in *First Outline of a System of the Philosophy of Nature* (Albany: State University of New York Press, 2004), p. 195.

9 Robert F. Brown, *The Later Philosophy of Schelling: The Influence of Boehme on the Works of 1809–1815* (Lewisburg: Bucknell University Press, 1977), p. 92.

10 On this score, I follow Beiser, who claims that the *Introduction to the Outline* constitutes the first unequivocal claim to nature-philosophy's disciplinary autonomy and that the *General Deduction* goes on to promote the idea that nature-philosophy is first philosophy. See Beiser, *German Idealism: The Struggle Against Subjectivism, 1781–1801* (Cambridge, MA: Harvard University Press, 2002), pp. 487–489.

11 Benjamin Berger and Daniel Whistler, *The Schelling–Eschenmayer Controversy, 1801: Nature and Identity* (Edinburgh: Edinburgh University Press, 2020), pp. 5–9. See also Sebstian Schwenzfeuer, *Natur und Subjekt: Die Grundlegung der schellingschen Naturphilosophie* (Freiburg and Munich: Karl Alber, 2012), p. 9.

12 Dieter Sturma makes the point well: for a philosophy of nature to be possible, the 'immanent circularity of subjectivity' must be 'broken' (Dieter Sturma, 'The Nature of Subjectivity: The Critical and Systematic Function of Schelling's Philosophy of Nature' in *The Reception of Kant's Critical Philosophy: Fichte,*

*Schelling, and Hegel*, ed. Sally Sedgwick [Cambridge: Cambridge University Press, 2000], p. 219); one cannot simply remain with Kant's empirical realism in order to develop a philosophy of nature, because 'the immediate consciousness of the existence of other things outside myself does not really suffice to overcome the immanence of subjectivity' (p. 221).

13 *Kants Gesammelte Schriften*, ed. Königlich Preußische Akademie der Wissenschaften (Berlin: de Gruyter, 1900–), Volume III (hereafter *KGS* followed by volume number), p. 12; *Critique of Pure Reason*, trans. Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), Bxvi, p. 110.

14 One might argue that the metaphysics Kant proposed to ground in the critical philosophy does have more in common with Schelling's project. After all, Kant argues that philosophy must include both a critical aspect, which concerns the faculty of reason, and a system of reason, which involves a metaphysics of nature and a metaphysics of morals (*KGS* III: 543–544; *Critique of Pure Reason*, A841/B869, p. 696). For an interpretation of Kant that emphasises and clarifies his metaphysical aims, see Karin de Boer, *Kant's Reform of Metaphysics: The* Critique of Pure Reason *Reconsidered* (Cambridge: Cambridge University Press, 2020). For a discussion of Schelling's rejection of critique as a propaedeutic to such metaphysics, see Benjamin Berger, 'The Science of All Science and the Unity of the Faculties: Schelling on the Nature of Philosophy' in *Metaphysics as Science in Classical German Philosophy*, ed. Robb Dunphy and Toby Lovat (London: Routledge, 2023).

15 In other words, even if there are certain similarities between Kant's projected metaphysics and Schellingian–Hegelian philosophy of nature, the former appears to the absolute idealists as necessarily adulterated by having its claims grounded in a critical propaedeutic focused on transcendental subjectivity.

16 See, for instance, *SW* I/4: 92; *On the True Concept*, p. 54. As Harald Holz argues, Schelling's ancient influences are narrowly Platonic (and, more specifically, Plotinian). Despite identifying his own philosophy of nature with 'physics in the sense of the Greeks', Schelling is not in fact motivated by a great range of ancient Greek sources. 'Neither Stoic cosmology nor even that of Epicurus—and just as little that of Aristotle—is a major inspiration for the development of Schellingian philosophy of nature.' Holz, *Die Idee der Philosophie bei Schelling: Metaphysische Motive in seiner Frühphilosophie* (Freiburg and Munich: Karl Alber, 1977), p. 73.

17 For the sake of bringing out the central thrust of Schelling's project, the following simplifies what is an incredibly complicated topic, namely, the relationship between the philosophy of nature and the other parts of philosophical science. For helpful discussions of the development of Schelling's thought on this issue, see Schwenzfeuer, *Natur und Subjekt* and Philipp Schwab, 'The Fichte-Schelling Debate, or: Six Models of Relating Subjectivity and Nature' in *Nature and Naturalism in Classical German Idealism*, ed. Luca Corti and Johannes-Georg Schülein (New York and London: Routledge, 2023), pp. 122–147.

18 *SW* I/3: 330; *System of Transcendental Idealism*, p. 1.

19 *SW* I/3: 346; *System of Transcendental Idealism*, p. 10.

20 *SW* I/3: 330–331; *System of Transcendental Idealism*, p. 2.

21 *SW* I/3: 364–365; *System of Transcendental Idealism*, p. 24. Schelling's transcendental-idealist story goes on, like Fichte's, to trace the conditions of subjectivity, genetically constructing the rational principles that make experience possible. As Nassar points out, the 'natural study [*Naturlehre*] of our mind' announced in the *Ideas* (*SW* I/2: 39; *Ideas*, p. 30) is part of this Fichtean project (Dalia Nassar, *The Romantic Absolute: Being and Knowing in Early German Philosophy, 1795–1804* (Chicago: University of Chicago, 2014), p. 205); it is not an attempt to inquire into the history of nature that precedes and ultimately gives rise to human life. For, in the first edition of the *Ideas*, Schelling has yet to properly distinguish the philosophy of nature from transcendental idealism, and he has yet to understand the history of nature as philosophically significant. For an alternative interpretation of this phrase and the way it anticipates what is to come in Schelling's mature philosophy of nature, see Grant, *Philosophies of Nature after Schelling*, pp. 104–152 and Grant, 'The Universe in the Universe: German Idealism and the Natural History of Mind', *Royal Institute of Philosophy Supplement* 72 (2013), pp. 297–316.

22 The former provides a rational and systematic ground for empirical knowledge and thus makes explicit what is required *in order to know*, while the latter amounts to a rational and systematic comprehension of the world itself as that which *is* known. For more on how this distinguishes Schelling's conception of philosophy from Fichte's, see Berger, 'The Science of All Science and the Unity of the Faculties'.

23 *SW* I/4: 85; *On the True Concept*, p. 49.

24 *SW* I/4: 78, 76.

25 See, e.g., *Science of Knowledge*, trans. Peter Heath and John Lachs (Cambridge: Cambridge University Press, 1982), p. 182.

26 *SW* I/4: 77–78.

27 *SW* I/4: 92; *On the True Concept*, p. 54. Emphasis modified. Likewise, in the *General Deduction*, Schelling argues that it is only by first attending to nature's own graduated sequence of stages, at the end of which man 'erupts' from nature, that we can subsequently make a transition to the system of transcendental idealism and thereby account for the manner in which objects conform to the subjectivity of consciousness (*SW* I/4: 75–78). Just as spirit depends upon nature as the ground of its existence, so too does transcendental idealism depend upon the philosophy of nature as its systematic foundation.

28 *SW* I/4: 86–87; *On the True Concept*, p. 50. Emphasis modified.

29 Beiser, *German Idealism*, p. 507.

30 *SW* I/4: 137n; *Presentation of My System of Philosophy*, trans. Michael Vater and David W. Wood in *The Philosophical Rupture Between Fichte and Schelling: Selected Texts and Correspondence (1800–1802)* (Albany: State University of New York Press, 2012), p. 253n.

31 *SW* I/5: 112; *On the Relationship of Philosophy of Nature to Philosophy in General* in *Between Kant and Hegel: Texts in the Development* of *Post-Kantian Idealism*, Second Edition, trans. and ed. George di Giovanni and H.S. Harris (Indianapolis: Hackett, 2000), p. 370. Emphasis modified.

32 See the 1803 edition of the *Ideas* (*SW* I/2: 72–73; *Ideas*, pp. 54–55) and the famous passage in the *Freedom* essay (*SW* I/7: 356; *Freedom*, p. 30) about the deficiency of modern philosophy.
33 *SW* I/3: 11–12; *First Outline of a System of the Philosophy of Nature*, trans. Keith R. Peterson (Albany: State University of New York Press, 2004), pp. 13–14.
34 *SW* I/3: 13; *First Outline*, pp. 14–15. Emphasis modified.
35 Note that Schelling's point holds even if one understands nature to be an environment in which one exists. To reduce nature to the environment is still to conceive of nature in an anthropocentric manner, i.e., as the objective realm given to or surrounding consciousness. The properly nature-philosophical question is: how does an environment *come to be*?
36 *SW* I/3: 18; *First Outline*, pp. 17–18.
37 *SW* I/3: 17; *First Outline*, p. 17.
38 *SW* I/3: 17; *First Outline*, p. 17.
39 Pierre Hadot, *The Veil of Isis: an Essay on the History of the Idea of Nature*, trans. Michael Chase (Cambridge, Harvard University Press, 2006), p. 274. See also the 1803 *Ideas*, (*SW* I/2: 70; *Ideas*, p. 52), where the physics of antiquity is seen as a special kind of discourse on nature, one destroyed by Bacon, Boyle, and Newton.
40 *SW* I/3: 284; *Introduction to the Outline*, p. 202.
41 *SW* I/3: 12n; *First Outline*, p. 14n.
42 See, for example, *SW* I/3: 284; *Introduction to the Outline*, p. 202. Although Schelling is clearly drawing upon Spinozist metaphysics in distinguishing between *natura naturans* and *natura naturata*—as well as in the emphasis on the immanence of consciousness—he ultimately uses this Spinozist position to call into question Spinoza's own substance ontology. For Schelling, not only is natural productivity the 'unconditioned' (*Unbedingt*) in that it is unconditioned by anything *other* than it, but this activity of production is also *not a 'thing'* (*Ding*) in any sense (*SW* I/3: 11; *First Outline*, p. 13)—unlike, Schelling later argues, Spinozist substance. See Chapter 3 below.
43 Another way to put this is to say that nature *as subject* is the condition for the possibility of *substantial* being in nature; it is 'the *principle* of everything objective' (*SW* I/3: 12; *First Outline*, p. 14). It follows that 'nature as subject' is non-phenomenal (*SW* I/5: 378; *Philosophy of Art*, p. 26), and can only be experienced in its products. This does not mean, however, that it is impossible to grasp nature's subjectivity *intellectually*.
44 *SW* I/3: 11; *First Outline*, p. 13. Emphasis modified.
45 Note that, in the *First Outline*, nature's doubleness cuts deeper than this distinction between productivity and product, since productivity itself is understood as intrinsically doubled. According to Schelling, for productivity to actually *be productive*, i.e., for productivity to yield real products, that productivity must be inhibited. For if productivity were simply infinite activity, we would not be able to account for how that activity becomes localised in finite, determinate products. What is required, according to Schelling, is an inhibiting activity at work within productivity itself, such that *natura naturans* is understood as both productivity and a force of *anti*-production. As Schelling puts

it in the *Introduction to the Outline*, there is thus an originary doubleness which '[*arises*] *in productivity itself*' (*SW* I/3: 308; *Introduction to the Outline*, pp. 218–219).

46 *SW* I/2: 56; *Ideas*, p. 42. Translation modified.
47 *SW* I/4: 76.
48 *SW* I/2: 66; *Ideas*, p. 50. Translation modified.
49 *SW* I/2: 226; *Ideas*, p. 181.
50 *SW* I/2: 56; *Ideas*, p. 42. Translation modified.
51 *SW* I/3: 339; *System of Transcendental Idealism*, p. 5.
52 See, for instance, *SW* I/4: 114–124; *Presentation*, pp. 145–152.
53 19 November 1800 Letter to Fichte in *HKA* III/2.1: 280; *The Philosophical Rupture Between Fichte and Schelling*, pp. 44–45. *SW*: I/4: 86–87; *On the True Concept*, p. 50. See also *SW* I/4: 371; *Further Presentations from the System of Philosophy*, trans. Michael Vater and David W. Wood in *The Philosophical Rupture Between Fichte and Schelling* (Albany: State University of New York Press, 2012), p. 212.
54 *SW* I/4: 151; *Presentation*, p. 168. The problem with transcendental idealism, then, is that it *only* seeks to understand the identity of subject and object from the perspective of spirit: 'Fichte's philosophy was the first to restore validity to the universal form of subject-objectivity, as the one and all of philosophy; but the more it developed, the more it seemed to restrict that very identity … to the subjective consciousness' (*SW* II/2: 72; *Ideas*, p. 54).
55 *SW* I/4: 114; *Presentation*, p. 145.
56 Naomi Fisher, 'The Epistemology of Schelling's Philosophy of Nature', *History of Philosophy Quarterly* 34.3 (2017), p. 271.
57 *SW* I/5: 113; *On the Relationship of Philosophy of Nature to Philosophy in General*, p. 372. Translation modified. Reason is therefore not *other* than individual human reasoners, but *more fundamental* than them; it is the reason *of the world*—a world that comes to consciousness in the intellectual activity of human individuals.
58 *KGS* V: 33; *Critique of Practical Reason*, trans. and ed. Mary Gregor (Cambridge: Cambridge University Press, 2015), p. 30. This is distinct from freedom in the negative sense, which involves mere independence from impulse or inclination.
59 *SW* I/3: 186; *First Outline*, p. 135.
60 *SW* I/2: 107; *Ideas*, p. 83. Cf. Henrik Steffens, *Rezension der neuen naturphilosophischen Schriften des Herausgebers*, *Zeitschrift für spekulative Physik* 1, ed. Manfred Durner (Hamburg: Felix Meiner, 2001), pp. 8–9.
61 *SW* I/3: 278; *Introduction to the Outline*, p. 198. Emphasis modified.
62 *SW* I/3: 278–279; *Introduction to the Outline*, pp. 198–199.
63 Fisher, 'The Epistemology of Schelling's Philosophy of Nature', p. 281.
64 *SW* I/3: 276; *Introduction to the Outline*, pp. 196–197. *SW* I/4: 92; *On the True Concept*, p. 54.
65 *SW* I/3: 277; *Introduction to the Outline*, p. 197.
66 *SW* I/3: 277; *Introduction to the Outline*, pp. 197–198.

67 As the Schellingian, Steffens, argues in his review of *On the World-Soul*, *First Outline*, and *Introduction to the Outline*, Schelling is already in the late 1790s providing a purely theoretical or speculative (i.e., non-empirical) ground for all knowledge of nature. Steffens, *Rezension der neuen naturphilosophischen Schriften des Herausgebers*, pp. 8–9.

68 *SW* I/5: 112; *On the Relationship of Philosophy of Nature to Philosophy in General*, p. 370. For more on Schelling's critique of the implicit empiricism of transcendental philosophy, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 158–161.

69 See *SW* I/5: 248–256; *On University Studies*, trans. E.S. Morgan and ed. Norbert Guterman (Athens, OH: Ohio University Press, 1966), pp. 42–50.

70 See, for example, Bruce Matthews's Introduction to his English translation of *The Grounding of Positive Philosophy* (Albany: State University of New York Press, 2007), pp. 54–68. Matthews, in fact, sees Schelling as having *always* had in mind a philosophical activity based in the intuition of life and experience of freedom, even in the early work. See Matthews, *Schelling and the Organic Form of Philosophy: Life as the Schema of Freedom* (Albany: State University of New York Press, 2011).

71 *SW* II/1: 576–577; *On the Source of the Eternal Truths*, trans. Edward A. Beach. In *The Owl of Minerva* 22 (1990), p. 57. Whether or not we can *show* the necessary movement from the Idea to the essence of the plant is not the crucial point for Schelling. The point is that there *is* a necessary link between 'the highest Idea of reason' and the 'multiply conditioned and complex possibility of the plant'. *SW* II/1: 576; 'On the Source of the Eternal Truths' p. 57.

72 Alison Stone, 'The Philosophy of Nature' in *The Oxford Handbook of German Philosophy in the Nineteenth Century*, ed. Michael Forster and Kristin Gjesdal (Oxford: Oxford University Press, 2015), p. 320.

73 See Chapter 3 below.

74 *SW* I/3: 278; *Introduction to the Outline*, p. 198. See also the *First Outline* itself:

> If there were chance in nature—just *one* accident—then you would catch sight of nature in universal lawlessness. Because everything that happens in nature happens with blind necessity, everything that happens or that arises is an expression of an eternal law and of an unimpugnable form.
>
> (*SW* I/3: 186; *First Outline*, p. 135)

75 *SW* I/4: 115; *Presentation*, p. 146.

76 Thus, in addition to the *forms* of nature being entirely rational, individuals are also rational. For Schelling, individuals are not the individuals they are on account of what they are *not* (as a generally Hegelian view would have it); individuals are what they are because of the precise way in which they express the rationality of being. As Marcia Sá Cavalcante Schuback points out:

> Schelling denies the traditional metaphysical conception that *omnis determinatio est negatio*, that every delimitation is a negation, both of another delimitation and of the whole. Singularity is not the lack of a totality. It is in

> itself—that is, in its life—a totality. Singularity is in itself a whole, the whole affirmation of itself, as the whole affirmation of its own force.

Marcia Sá Cavalcante Schuback, 'The Work of Experience: Schelling on Thinking beyond Image and Concept' in *Schelling Now: Contemporary Readings*, ed. Jason M. Wirth (Bloomington: Indiana University Press, 2005), p. 74. As Schelling himself puts it:

> The determination of form in nature is never a negation, but rather always an affirmation. Admittedly, you usually think of the figure of a body as a restriction that it bears. But if you looked at the creative force, it would be evident to you that the figure is a measure that the creative force imposes on itself within which it appears as a veritably ingenious force. For the capacity to set one's own bounds is everywhere regarded as a virtue, even as one of the highest. In a similar fashion, most people consider the particular as negating, namely, as what is not the whole or the all. But no particular exists by virtue of its limitation, but rather by virtue of its indwelling force with which it asserts itself as its own whole in the face of the whole itself.

*SW* I/ 7: 303; *On the Relationship of the Plastic Arts to Nature*, trans. Jason M. Wirth in Kabiri 3 (2021), pp. 141–142. For at least a certain Schelling, each and every thing is an affirmation of being or reason. Negation is not what makes things what they are.

77 *SW* I/3: 186; *First Outline*, p. 135.

78 The difference between the early and late Schelling on this point could hardly be more striking: the fundamental aim of the late work is to distinguish between a rationalism of essential forms (i.e., 'negative philosophy') and an empiricism attentive to the contingent existence of individuals (i.e., 'positive philosophy'). See Chapter 8 below.

79 See Hegel's response to Krug's critique of Schelling in *W* 2: 188–207; 'How the Ordinary Human Understanding Takes Philosophy (as displayed in the works of Mr. Krug)', pp. 292–310. See also Christopher Lauer, *The Suspension of Reason in Hegel and Schelling* (London: Continuum, 2010), pp. 80–82.

80 *SW* I/3: 275; *Introduction to the Outline*, p. 196. Translation modified.

81 *SW* I/3: 307; *Introduction to the Outline*, p. 218.

82 *SW* I/3: 6; *First Outline*, p. 6.

83 E.g., *SW* I/3: 320n; *Introduction to the Outline*, pp. 227–228n.

84 An anecdote mentioned by Boris Gasparov illustrates the point well: In response to Friedrich Schlegel's enthusiasm about the possibility of historicising the self, Fichte is said to have remarked that he 'would rather count beans that muse about history'. Boris Gasparov, *Beyond Pure Reason: Ferdinand de Saussure's Philosophy of Language and Its Early Romantic Antecedents* (New York: Columbia University Press, 2013), p. 128.

85 'Concerning the Concept of the *Wissenschaftslehre* or, of So-called "Philosophy" ', Preface to the Second Edition, in *Fichte: Early Philosophical Writings*, trans. and ed. Daniel Breazeale (Ithaca and London: Cornell University Press, 1998), p. 97.

86 In fact, intimating what is to come in the *Ages of the World*, Schelling suggests in the *First Outline* that a philosophical consideration of nature's productivity, when properly speculative, could amount to a genuinely *scientific* account of natural history:

> *Natural history* has been, until now, really the *description of Nature*, as Kant has very correctly remarked … However, if the idea set out above were put into practice, then the name 'natural history' would get a much higher meaning, for then there would actually be a *history* of Nature itself.
>
> (*SW* I/3: 68; *First Outline*, p. 53)

Schelling goes on to say that nature's history would be properly historical if it proved to 'gradually [bring] forth the whole multiplicity of its products' through a *free* and yet *lawful* [i.e., rationally necessary] development (*SW* I/3: 68; *First Outline*, p. 53).

87 Lovejoy, *The Great Chain of Being*, pp. 317–320.

88 *SW* I/1: 466–467; *Is a Philosophy of History Possible?*, trans. Benjamin Berger and Graham Wetherall in *The Schelling Reader*, ed. Benjamin Berger and Daniel Whistler (London: Bloomsbury, 2021), p. 187.

89 How does Eschenmayer's use of the term differ? First, his philosophy of nature is Fichtean through and through; it is not an *ontological* investigation into the nature of nature as is Schelling's speculative physics, and therefore potency always refers back to the living subject for Eschenmayer. Second, he retains the strictly quantitative sense of the mathematical term and does not, as Schelling does, conceive of the potentiation of nature as involving any kind of qualitative determinacy. For a more detailed account of this difference, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, Chapters 1, 2, and 4.

90 For more on the difference between Aristotelian and Schellingian potency, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 104–109.

91 *SW* I/4: 44–45.

92 *SW* I/2: 226; *Ideas*, p. 181. A remark even more damning for my interpretation is found in § 44 of the *Presentation*. Schelling begins by claiming that

> *All potencies are absolutely contemporaneous (Gleichzeitig)*. For absolute identity is only under the form of all the potencies … It *is* eternal, however, and without any reference to time … Therefore the potencies too are without any reference to time, simply eternal, therefore contemporaneous among themselves.

He concludes from this that '*there is no reason to begin with one or the other of them*' (*SW* I/4: 135; *Presentation*, p. 157, my emphasis). But this remark is misleading. Schelling himself *does* always begin with the first potency, and this isn't accidental. One reason he even develops a doctrine of potentiation is because it exhibits the manner in which the higher stages of reality are intelligible with respect to the lower stages—$A^2$ being A duplicated with itself. Therefore, although Schelling can be seen at times to devalue the developmental character

of reason, or to downplay the serial nature of the potencies, we should recognise that the fundamental reason to insist upon the simultaneity of the potencies is to distinguish between the temporal development of the phenomenal world and the atemporal yet nevertheless developmental structure of reason or being as such (*SW* I/2: 342; *Ideas*, p. 272). He is trying to make clear that the development of the potencies is not a historical development.

93 *SW* I/4: 85; *On the True Concept*, p. 49. For a more detailed account of depotentiation, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, Chapter 5.

94 In Schelling's later thought, depotentiation is understood in terms of 'ecstasy' or self-abandonment: 'What man needs is not to be placed inside himself, but outside himself.' *SW* I/9: 230; *On the Nature of Philosophy as Science*, trans. Marcus Weigelt in *German Idealist Philosophy*, ed. Rüdiger Bubner (Harmondsworth: Penguin, 1997), 229. We find versions of this epistemic practice prior to Schelling. Bloch discusses a long history of thinkers who operate under the imperative to identify with nature, citing, for instance, Leonardo Da Vinci's claim that the painter must 'transform himself into the spirit of nature'. Bloch, *The Principle of Hope*, Vol. II, pp. 671.

95 *SW* I/4: 77.

# 2 Dynamics, Physics, Organics

One of Schelling's most important ideas is that nature is a *Stufenfolge*, a progressive system of stages in which the more basic stages or forms of nature lead to more complex stages or forms of nature. Although his understanding of some of the details of this system change from one year to the next, he is generally consistent about the major stages or levels and how they are related to one another. This chapter aims to elucidate the three most general stages of nature as they are described throughout Schelling's various sketches, outlines, and presentations of nature-philosophy: the fundamental forces, the categories of physics, and the activities of the organism. Discussing the latter of these three stages will allow us to turn, in Chapter 3, to his conception of the human organism and the manner in which life on earth paves the way for the emergence of a spiritual form of existence.

Before delving into the details of the three major stages of nature, it is worth briefly reminding the reader that I do not seek to assess Schelling's understanding of the natural world from the perspective of natural scientific research—be that the empirical research of Schelling's time or our own. While it is true that Schelling's philosophy of nature exerted a significant influence on the sciences of his day—Ørsted's discovery of electromagnetism, for instance, is owed, in part, to Schelling's account of the relationship between magnetism and electricity[1]—judging the philosophy of nature from the standpoint of empirical-scientific knowledge strikes me as anti-philosophical.[2] For it suggests that we can judge the virtues and vices of a philosophical vision on the basis of non-philosophical forms of knowledge. To assume that Schelling's philosophy of nature may only be relevant to the extent that it is consistent with empirical research also goes against Schelling's own intellectual commitments. For Schelling, experimental physics follows the rationalist philosophy of nature; the reason empirical sciences can learn anything about the natural world is that they proceed on the basis of rational, i.e., philosophical insight into

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the fundamental nature of reality.[3] That this idea is so difficult for us to grasp speaks to how deeply held our empiricist prejudices are. If it does nothing else, then, studying the idealist philosophies of nature developed by Schelling and Hegel brings to light the overwhelmingly empiricist assumptions of our age.

## The Fundamental Forces of Nature

According to Schelling, the most basic feature of the natural world is the simple fact that it is *material*, and the first part of the philosophy of nature involves what he calls the dynamic construction of matter. This 'construction' of matter is absolutely crucial to Schelling's project for two interrelated reasons: First, everything that happens in the philosophy of nature is only made possible on the basis of this initial stage of nature and is, therefore, incomprehensible without reference to the forces of matter. Second, it is only by conceiving of matter as *immanently active* that the philosophy of nature can present the ontological continuity between inorganic nature, on the one hand, and the self-determination of life and human spirit, on the other. What becomes apparent, therefore, is that Schelling's rejection of the modern conception of nature as mere 'objective thing' informs his appreciation for a dynamic conception of matter in which change of motion is understood to be immanent to matter itself.

Schelling's understanding of matter as immanently mobile is developed in response and opposition to the Newtonian conception of matter. According to Schelling, Newtonian mechanics fails to capture the reality of matter for a number of reasons. Most importantly, however, he takes issue with the first law of Newton's physics, which states that 'every body perseveres in its state of being at rest or of moving uniformly straight forward, except insofar as it is compelled to change its state by forces impressed.'[4] The Newtonian attributes all change in velocity to an external force, whether this be a force leading to physical impact between inert bodies or a force acting from a distance, as in gravity. In both cases, material bodies are seen as ontologically distinct from the forces that move them, and as a result, Newtonian physics conceives of nature in terms of a dualism between material bodies and immaterial force.[5]

Of course, Schelling was not the first to see the dualism of Newtonian mechanics as a problem. One attempt to challenge the Newtonian picture seeks to eradicate the conception of force acting from a distance by interpreting all motion in terms of mechanical contact. This was the strategy taken up in the mid-eighteenth century by Georges-Louis Le Sage, who Schelling praises as a truly speculative philosopher despite his failure to see the limits of mechanism.[6] Because Le Sage represents the paradigmatic mechanistic solution to Newtonian dualism, considering Schelling's

critique of Le Sage will put us in a position to understand Schelling's alternative solution to Newtonian dualism: to conceive of matter as intrinsically dynamic.

The mechanical physicist follows Newton in understanding matter as inert but rejects the idea that change in velocity results from anything other than contact. On this view, any change in the motion of a given body is necessarily caused by contact with *another* body, and the task of the thoroughgoing mechanist is to account for gravity, magnetism, and chemical processes with reference to contact alone. Thus, in order to overcome Newtonian dualism, Le Sage proposes the following model: an indefinite number of ethereal particles or gravitational atoms move rectilinearly throughout the universe in every direction. Given two material bodies *A* and *B*, body *A* acts as a barrier blocking the stream of particles that would otherwise continue moving towards body *B* (and vice versa). The quantity of ethereal particles moving between the two bodies is consequently decreased, as each body upsets the balanced quantity of particles making contact with the total surface area of the *other* body. The two bodies are thus driven towards one another by the ethereal particles insofar as *more* particles or gravitational atoms make contact with the unshielded sides of each body.[7]

According to Schelling, Le Sage's account of gravitational motion is the most comprehensive mechanistic account possible. Everything, on this account, is explained mechanically—everything, that is, but the 'first cause' of motion, which sets the ethereal particles and material bodies into contact from the start. Schelling asks: 'But whence does this inexhaustible stream [of particles] come, from what era does it derive, and what supports it continually?' And since the mechanist has no response, according to Schelling, 'this system ends with the inexplicable.'[8] The ground of movement must reside in some extra-mechanical sphere that mechanical physics is unable to explain.[9] Moreover, because nature is understood to be entirely mechanistic on this view, the 'extra-mechanical' sphere must be located beyond nature, a ground of movement ontologically separate from the natural world.

Thus, according to Schelling, mechanistic philosophy of nature is ensnared by the same metaphysical dualism that it attempted to avoid. For if one seeks to overcome the Newtonian dualism of material bodies and immaterial force by way of a thoroughgoing mechanism, dualism reappears: a mysterious principle of movement is implicitly posited as external to the ethereal particles and material bodies that, by definition, cannot put themselves into motion.[10] This reappearance of dualism stems from the mechanist's claims to ignorance about the origin of movement, since matter is defined in abstraction from actual movement (and is only *capable* of being moved). Therefore, according to Schelling,

it is the Newtonian assumption that matter is inert and dependent upon some external activity in order for it to change its state of motion that necessitates a dualism in which matter is understood to be ontologically distinct from the fundamental cause of motion; by definition, then, mechanistic philosophy cannot overcome this dualism.[11]

In order to circumvent the explicit dualism of Newtonian physics and implicit dualism of mechanistic physics, Schelling draws upon Kant's influential *Metaphysical Foundations of Natural Science*. Although the *Metaphysical Foundations* fully endorses Newtonian science and seeks to provide it with a grounding in metaphysics, Kant criticises the Newtonian position that makes gravitational attraction contingent in relation to the existence of matter.[12] Thus, in the second chapter of the *Metaphysical Foundations*, Kant develops a 'metaphysical grounding of dynamics' in which force is shown to be entirely necessary for the very existence of matter. In this chapter, Kant argues that matter is conceivable *as matter* only if such matter is constituted by force. Thus, on the dynamical model, gravitational motion is no longer seen to be accidental to matter but is instead understood to be intrinsic to matter as such. In this way, mechanical, contact-based motion can be seen as possible on the basis of a more original and immanent form of material activity. For it is only if material bodies are constituted by forces that those bodies can be responsive to contact with other bodies.[13] For these reasons, Schelling sees Kant's dynamics as central to overturning the dualism of matter and force.

Kant's analysis of the constitutive forces of matter is part of his more general investigation into how we experience natural objects. In the chapter on the dynamic construction of matter, he rejects the idea that matter is simply *in* space, as if being extended were an accidental feature of material bodies. According to Kant, matter is only matter insofar as it is spatially extended, and this means that matter must necessarily fill space. Indeed, to be material, according to Kant, is to 'resist everything movable that strives by its motion to press into a certain space', i.e., to repel other matter from its location.[14] Matter, then, actively fills space on account of a repulsive or expansive force.[15] Yet, importantly, if this force were to act without any resistance, then matter would not remain in its place; it would be scattered infinitely outwards. As Kant puts it, 'with merely repulsive forces of matter, all spaces would be empty; and hence, strictly speaking, there would be no matter at all.'[16] If there is to be spatially extended matter—and, for Kant, if it is going to be possible for us to sense such matter—then it must not only expand infinitely outwards through its activity of repulsion, but it must also be compressed by a universal force of attraction. 'No matter is possible' without *both* of these forces;[17] they are irreducible or fundamental.[18]

Beginning with the first edition of the *Ideas*, Schelling promotes a version of Kant's dynamic construction of matter—although, as Schelling gradually dissociates himself from the transcendental standpoint of critical philosophy, it becomes clear that, on his view, the dynamic construction of matter does not only demonstrate what must be the case for human beings to *experience* a material world. The dynamic construction of matter, instead, demonstrates that matter *just is* a dual activity of expansion and contraction. A properly speculative philosophy of nature, for Schelling, is in this way different from Kant's philosophy of nature. Rather than grounding our *understanding* of matter as impenetrable, spatially extended stuff, the philosophy of nature ought to simply show us what matter essentially *is*—apart from any act of human cognition.[19] This is why, Schelling argues, the dynamic construction of matter is more fundamental than any investigation into the way things must appear to consciousness (i.e., more fundamental than the entire project of transcendental idealism).[20]

It is important to note, however, that while Schelling points beyond the subjectivist limitations of Kant's dynamic construction of matter, he continues to understand this construction to be a *rational* one that sets out to the necessary principles that make matter what it is.[21] Neither Kant nor Schelling conceives of the construction of matter as a historical process in which matter is actually generated by forces. For neither philosopher are there forces *and then* material bodies. The dynamic construction of matter is meant to prove that 'matter is itself *nothing else but* a moving force',[22] and it is in *this* sense that, as Snow remarks 'the essence of matter is force' for Schelling.[23] From Schelling's perspective, there are not forces *and* bodies, but bodies that simply *are* complexes of force. And this is central to how he aims to overcome Newtonian dualism.

Following the publication of the first editions of the *Ideas* and *On the World-Soul*, Schelling revises his conception of the fundamental forces in an important way. Beginning with the *First Outline* of 1799, he draws upon Franz Baader's conception of gravity in order to distinguish it—as Baader does—from attractive force.[24] Although the Kantian construction of matter resolves an important issue in Newtonian mechanics by insisting upon the immanence of gravitational force to bodies themselves, this model fails to distinguish between the attractive force, which counteracts repulsion and thereby makes matter possible, from the gravitational motion of bodies that are extended in space. The latter, according to Schelling, 'is not a simple, but a compound motion', since free fall is only possible insofar as a body exists *as* a determinate body occupying space, i.e., a body already defined by its expansive and contractive activities.[25] The crux of Schelling's argument is that material bodies can fall towards *other* bodies only if they are already constituted as spatially extended bodies with a specific weight. Consequently, the attractive force integral to the construction of matter

should not be mistaken for the more complex phenomenon of gravitational motion. Gravity is a third, notionally separable feature of matter that accounts for the specific manner in which material bodies seek one another through their sheer heaviness (*Schwere*).

Although it is neither simple nor fundamental, gravity is nevertheless as essential to the being of matter as are repulsion and attraction. It is the activity through which one material body is driven, on account of its own weight, to unite with other material bodies. When compared to the Newtonian and mechanistic accounts of gravitation, we can see that this model achieves the immanence that Schelling has been after: the motion that results from the heaviness of bodies is not explained in terms of action from a distance; and it is not explained in terms of gravitational particles making contact with a material body. For Schelling, the gravitational motion of a body is due to its own being as matter, i.e., its heaviness. In this way, gravity demonstrates the intrinsic mobility of matter.[26]

Inspired by Baader's conception of gravity as the 'common ground' of repulsion and attraction,[27] Schelling identifies gravity as their 'indifference point', that is, their point of unification.[28] And this is, in part, because gravitational motion gets underway when there is a system of material bodies in space, i.e., a system of bodies constituted by the forces of repulsion and attraction, forces that are not simply in tension with one another but—through the system of material bodies—become organised in a harmonious structure.[29] Indeed, from a certain perspective, gravity *is* the 'organization of the universe';[30] it is that which 'assigns to [each body] its position in the universe' and 'binds' it to the whole.[31] The fundamental forces can be seen to be unified, then, to the extent that material bodies—which simply *are* the forces of repulsion and attraction—are organised into a system of bodies that seek unity with one another.

One reason this is important, for Schelling, is because it supports an immanentist picture of nature: just as the dualism of matter and force is overcome with the dynamic construction of matter, so too is the dualism of repulsive and attractive force overcome—the two being unified in gravity.[32] What is more, insofar as bodies fall towards other bodies, they show themselves to exceed their selfsame identity and seek identification with *all that is*. 'By virtue of gravity the body is in unity with *all others*.'[33] In this way, gravitational motion is structurally analogous to—and, according to Schelling, a more basic expression of—chemical processes (as discussed below). For both gravity and chemical processes *dissolve*, or seek to dissolve, a certain form of difference in nature, proving that—at bottom—nature is unified or, at the very least, that nature tends towards unification:[34] gravity is the 'universal striving toward indifference'.[35] As we will see, living things also seek unity, according to Schelling, but they do so in a manner that depends upon a more persistent separation

of the individual—a temporary yet substantive maintenance of the living thing's *self*-identity, such that it can ultimately give itself over to the life of its species and the whole of nature. What we see here is that a tendency towards unification is already at work in nature, at a more fundamental level than will be found in the organic world or even in the qualitative determinacy involved in chemical processes. The sheer position and motion of material bodies—abstracted away from all other features of those bodies—involves a kind of unity. We will encounter a similar thought in Hegel's philosophy of nature.

With the publication of the *Presentation of My System of Philosophy* in 1801, the forces of nature are given symbolic expression in the algebraic notation that comes to be so important for Schelling's philosophy of nature. Although he began describing the most general forms in nature in terms of 'potencies' (*Potenzen*) in 1799, it is with the *Presentation* that his doctrine of the potencies reaches a kind of maturity. Influenced by Eschenmayer's use of the concept in his own philosophy of nature, Schelling finds in the mathematical language of 'potency' and 'potentiation' the possibility of expressing, in rational form, the connections and differences between the major features of the natural world.[36] Chemical processes, for instance, are understood to be gravitational motion *raised to the second power*. And, taken as a whole, the series of forces we have been considering—repulsion, attraction, gravity—is identified as the *first potency* of nature, i.e., nature in its most basic sense, symbolised as '$A = B^{+}$', for reasons that will be explained shortly.

The language of potencies is helpful for Schelling, because it emphasises the fact that, although there are more and less complicated and, in this way, *different* kinds of things in the natural world, each and every thing that *is* is an expression of reason or subject-object identity.[37] As we saw in Chapter 1, this is a central feature of Schelling's rationalist nature-philosophical perspective. The law of reason, according to Schelling—and therefore the law of being itself—is 'the law of identity … A = A';[38] subjectivity and objectivity do not exist apart from one another but as two elements of reason or being. Representing 'A = A' as 'A = B' allows us to see that subject-object identity can also involve a kind of difference within it, such that the first 'A' and the second 'A' appear different from one another (i.e., as 'A' and 'B'—subject and object), yet without cancelling their identity.[39] In nature, there is subject-object identity with a preponderance of 'B' (the objective), and in the human world, there is subjecti-object identity with a preponderance of 'A' (the subjective). The most basic expression of reason or subject-object identity is the first potency or stage of nature, and this can be represented as '$A = B^{+}$', because the most basic expression of reason or subject-object identity has a preponderance of objectivity. (Recall from Chapter 1 that nature, for Schelling, is the *objective* subject-object. Although nature involves both subjectivity and objectivity, it is,

on the whole, more objective—more like a thing—than it is subjective.) Finally, in order to demonstrate the way any major feature of nature is related to the law of being, Schelling identifies it with some aspect of that law. With respect to the first potency, attraction ('A') is unified with repulsion ('B') by gravity ('='): $A = B^{+}$.[40]

Since Schelling uses this algebraic language to varying degrees throughout his writings on the philosophy of nature, I will not focus on it throughout this and the following chapter. This language is nevertheless important, however, because it speaks to Schelling's commitment to conceiving of nature not only as a system of *stages* (*Stufen*), but a system constituted by potencies or powers. The development from one stage of nature to the next, then, will be a process of potentiation, in which the more complex forms of nature are conceived of as intensifications of the lower forms of nature. In Part II of this book, we will turn to Hegel's critique of Schellingian potentiation; one of the major differences between these philosophers concerns how they understand the atemporal development that moves from inorganic matter to life, the mind, and human freedom. Hegel, we will see, rejects this mathematical concept along with the idea that nature's development can be understood in terms of the sheer intensification, or maximisation, of reason.

Before we turn to Hegel, however—and before we move on to Schelling's understanding of the second and third potencies—it is also worth emphasising the fact that, for Schelling, the most basic expression of reason is matter, the 'prime existent'.[41] This is, again, reason understood not as a faculty of the mind but as being itself.

In his late philosophy, Schelling argues that such an exclusive focus on reason and that which is rationally necessary can prevent one from attending to that which is beyond reason, that which is 'unprethinkable' (*unvordenklich*). And at times, Schelling's earlier philosophy is read in light of his later interest in that which is in some sense beyond the rational structure of reality. But the early Schelling, read on his own terms, is committed to the view that reason is *all things*, and this is includes sheer matter and its motion. Thus, in the second edition of *On the World-Soul*, when Schelling states that matter is 'the most obscure thing of all',[42] he is not suggesting that matter is in some sense beyond rational comprehension. On the contrary, matter *is* reason in its most basic expression.[43] To be sure, from the perspective of *consciousness*, matter is obscure, and that is because the *being* of matter is more fundamental than the being of consciousness, and we do not, in our everyday lives, recognise the rational structure of the material world. Indeed, in order to comprehend what matter *is*, we must bracket not only the reality of our own consciousness but the existence of *all* living things and even the sensible properties that disclose the qualitative determinacy of material objects. It is no wonder, then, that

sheer matter—this most basic form of reason—appears so strange to us and, from a certain perspective, beyond our grasp. In fact, since matter does not exist as an empirical reality as *sheer* matter-in-motion, but always involves qualitative specificity, it can even appear to lack *being*—hence the Neoplatonist conception of matter as *to me on*, that which does not exist.[44] But for Schelling, matter is not 'mere nothingness'.[45] Understood properly—that is, dynamically—it proves to be real, intelligible, and the source of everything else that is. 'Matter', he writes, 'is the general seed-corn of the universe, in which is hidden everything that unfolds in the later developments;'[46] it is the fully rational 'root out of which arises all the forms and living appearances of nature.'[47]

### Why There is a Material World

The next major stage of nature is the second potency, in which the dynamism of matter is realised more intensively in material quality. Yet before turning to this stage of nature, let us consider why reason has expressed itself as a material world in the first place. Yes, Schelling understands matter to be the 'prime existent', the most basic expression of reason. But *why*, on his account, does reason express itself as matter? And why is the material world the diverse or differentiated world that it is? We already know that Schelling will claim that the second and third potencies are, like sheer matter, expressions of reason or subject-object identity. And perhaps we find that idea compelling. It still doesn't explain *why* reason is expressed as qualitative diversity (in the case of the second potency) and as organic activity (in the case of the third potency). Why, then, does sheer matter potentiate itself into these higher stages of nature? That is, why does nature transform itself—in an atemporal development—into more explicitly self-determining or 'subjective' forms? Why is there a world in which we discover material bodies with qualitative determinacy, some of which are alive?

These questions are all downstream from the more fundamental question, 'Why are there beings rather than nothing?', a question that is of central concern to Schelling in his late philosophy. It is often said that, prior to his late thought, Schelling does not have an answer to that question, and that the Schelling of the philosophy of nature and the identity philosophy simply fails to account for why there are beings at all, i.e., why reason expresses itself as a world. This is said of Schelling, in part, because the question about why there are beings at all does not frequently arise as an explicit question until his late work. It is also said, in my view, because the late Schelling interprets his own, earlier philosophy of nature as a project separated from such an inquiry into the ultimate '"why" question'. For the late Schelling, the rationalist philosophy of nature can

explain the connections between everything that *is*, but it cannot get at the fundamental *event* that realizes the potencies in *actual history*, making them *exist* in the first place.[48] And the reason for this, according to the late Schelling, is that there is a *limit to reason*: reason only ever discloses *what there is*, never the sheer fact *that* things exist.[49] *That things exist*—we tremble before this fact if we consider the possibility that the world *might not have come to be*. That creation *occurred*—that is not something that can be explained by a rationalist philosophy of nature according to the late Schelling. From the perspective of his late philosophy, then, the existence of the material world and the qualitative determinacy found within it is neither rationally necessitated nor rationally explicable; the answer to the 'why' question will have to appeal to something beyond reason and beyond being itself. It will have to turn to God—understood, in the late work, as transcendent Lord of Being.

The late Schelling's story here has had a considerable influence on the reception of his thought as a whole.[50] And contemporary Schelling scholarship is no exception; contemporary Schellingians are, in many cases, motivated by late-Schellingian, quasi-existentialist concerns.[51] S.J. McGrath's work is exemplary in this regard. According to McGrath, 'every explanation offered by rational philosophy leaves out the heart of the matter, the fact of the givenness of things', i.e., why there is something rather than nothing.[52] 'Identity-philosophy', McGrath continues, 'which is the fruition of various sketches of nature-philosophy … is a system of *the rational*, not a system of *the real*. It deals with essence, not existence.'[53] This alone is not something that needs to be criticised, according to McGrath; he thinks it is important, however, that we note—along with the late Schelling—that the rationalist philosophy of nature *has a limit*, and that this limit is the sheer fact of existence.[54] G. Anthony Bruno similarly suggests that the rationalist philosophy Schelling pursues in the early 1800s is limited in being unconcerned with explaining the existence of that which is: 'The period of the philosophy of identity … is the only period in which Schelling dismisses the question "why something".'[55]

In different ways, McGrath and Bruno each recall Heidegger's Schelling-interpretation.[56] In his lecture course on *The Principle of Reason*, Heidegger claims that, after the 'incubation period' during which the question 'why there is something rather than nothing' remained dormant came to a close with Leibniz, there followed another, much briefer, period of inactivity before another philosopher dealt with this question in a serious manner. That philosopher was Schelling.[57] And, for Heidegger, it is not Schelling's philosophy of nature or identity philosophy in which the ' "why" question' received serious engagement; it is, rather, in the later work—beginning with the *Freedom* essay and leading to the positive philosophy in which this question is addressed again and again. According to Heidegger, asking

the question in a genuine way means that one will ultimately come face-to-face with the fact that there is no *reason* that can account for the fact that *there are beings*, or that things *are*. To insist upon a reason or an explanation is to remain with *what is* and to fail to properly bring the question to mind as a question, an opening to another way of thinking. For Heidegger, a thoughtful engagement with the question will involve turning from mere beings and the rational explanations offered by philosophers and turning towards that which withdraws from the light of reason. And such a turning of our attention requires a 'leap'[58]—it cannot be achieved through rational thought.[59] Although he is critical of the theological direction of Schelling's late thought,[60] Heidegger nevertheless sees something profound in it, for it implies that there may be something beyond rationality and something other than *what is*—something glimpsed in the 'nothing' uttered in the principle of sufficient reason, *nihil est sine ratione* (nothing is without reason).[61] What Heidegger suggests in all of this is that any serious confrontation with the question about why there is anything at all will bring a philosopher into proximity with the possibility of non-being, with the contingency of facticity, and with the weight of existence as that which is beyond rational explanation.[62]

It is possible that Heidegger and those scholars I take to be quasi-Heideggerian interpreters of Schelling are correct, and that it is, in fact, in Schelling's later thought that his most serious engagement with the '"why" question' can be found.[63] It is also worth considering, however, whether things appear this way only if we first presume that a serious questioning about why things are the way they are will have to appeal to or hint at something *other than that which exists*. If we ask, 'Why "*x*"?' and expect an answer *other than 'x'*, then we have decided from the start what will and what will not count as thoughtful consideration of the question. That is to say, there is a way of *asking* the question about why there is anything at all that *orients* the questioner in a dualistic manner. Leibniz, the late Schelling, and Heidegger each offer various ways of thinking about the question, but they share this dualist orientation.[64]

Thinking along these lines, it is no wonder that the earlier Schelling appears to have little to say about why there are beings rather than nothing. But what if we set aside the dualist orientation shared by Leibniz, the late Schelling, and Heidegger? Doing so will allow an alternative assessment of the earlier Schelling to come into view.

The philosophy of nature Schelling pursues at the turn of the nineteenth century exemplifies a very different type of engagement with the '"why" question', one that has a history of its own, beginning with Parmenides, receiving theological articulation in Anselm's ontological argument, and culminating in the Spinoza Renaissance in German idealist and romantic philosophy. From the perspective of this tradition, the '"why" question'

is not insignificant, but a person who poses it is misguided if they think that the only serious answers to the question will refer to something *other* than *what is*, as if the *explanans* must always transcend the *explanandum*. The rationalist tradition to which the earlier Schelling belongs conceives of the *reason* for reason's self-expression as *internal to reason*. That is to say, the answer as to why reason, or the absolute, must necessarily express itself in some way is to be found within reason, or the absolute, itself. According to Schelling, the absolute is 'that for which it is absolutely impossible not to be, just as nothingness is that for which it is absolutely impossible to be.'[65] Reason, the absolute, cannot *not* be. It lacks nothing, including existence. And nothingness, by contrast, *cannot* be—precisely because it is *nothing*. The Schellingian absolute *necessarily* affirms itself as actual. Such 'affirmation (*Bejahung*) … is no mere accident in reason'.[66] Parmenides' prose-poem and the entire history of ontological arguments that follow it are alive in this thought.

Bruno suggests that this line of reasoning accounts for Schelling's dismissal of the ' "why" question' 'at the height of [his] confidence in reason's ability to cognize the absolute, whose necessary existence allegedly renders nothingness inconceivable.'[67] Indeed, from the perspective of Schelling's rationalist philosophy of nature, non-being is inconceivable and therefore *cannot be*. It is not clear to me, though, that this amounts to a dismissal of the question about why there is anything at all. On the contrary, I take Schelling to be putting forward a distinctive answer to that question. Reason or the absolute cannot not be, *because it is absolute*—it is not lacking in any sense. *That there is reason* follows from *what reason is*; existence follows from essence. This is what it means for something to 'contain the ground for its existence in itself'.[68]

Thus, if we leave behind the dualist orientation of much reflection on why there is something rather than nothing, we see that, in the philosophy of nature, Schelling does have an answer to that question; indeed, both the question and his answer to it are central to his philosophical perspective.

We should note, however, that Schelling's thinking here—at least as we have considered it up to this point—only gets at the most general formulation of the ' "why" question', namely, *'why is there anything at all?'*. We haven't yet hit upon any answers to the questions with which this section began and that are, logically speaking, further downstream. Why is there a material world *specifically*? Couldn't the absolute just as well express itself in thought alone? And why is the material world as diverse as it is? To put that third question otherwise: Why does nature potentiate itself? Could reason not simply express itself as matter-in-motion, without any further intensification of its subjective element in inorganic qualities and organic activities?

The philosopher who is most helpful in posing these questions is Hegel, whose critique of the early Schelling on *why things are the way they are* is more challenging to address, it seems to me, than those criticisms leveled at the early Schelling in a Heideggerian or quasi-Heideggerian vein. This is because Hegel, too, is a Spinozist of sorts. Hegel puts forward his own version of the idea that we can (and must) explain *why* reason or being *is* with reference to reason or being alone. Hegel, like Schelling, argues that reason only *is reason* insofar as it is *expressed*. This fact is represented, according to Hegel, in the Christian story of *kenosis*, in which God proves to be *truly* divine only in emptying himself out *as* a world and *in* the world. Divinity—or absolute being—only *is* if it is made manifest.

Yet the idea that reason must necessarily express itself does not explain why reason expresses itself in the variety of ways that it does. And Hegel thought that Schelling failed to make this latter issue clear. In opposition to what he saw as Schelling's inability to provide an explanation for nature's potentiation, Hegel developed a method of dialectical logic. In Part II of this book, we will look closely at this method. Very briefly, however, Hegel thinks that each stage of nature must be logically explicated in order to draw out its implicit truth. Doing so, the philosopher of nature is in a position to understand how the most basic stages of nature rationally necessitate the more advanced stages of nature. Moreover, this process of logical explication involves self-negation, in which a given stage of nature negates its character as the stage it is and proves to be different from itself. By arguing that the stages of nature negate *themselves*, Hegel remains committed to the idea that nature is entirely self-determining while he also develops a novel, anti-Parmenidean form of immanence in philosophy: through the logic of self-negation, *non-being* comes to play a key role in explaining why things are necessarily the way they are.

Schelling does not conceive of potentiation in terms of logical explication, nor does he think non-being and negation explain anything about why and how reason expresses itself.[69] '*Absolute identity as identity cannot be cancelled in any way*. That is, it can at no point and in no form whatsoever be negated.'[70] The stages of nature are not negations of the absolute, nor do they negate themselves in order to form a sequence of stages. On the contrary, the expression of reason *as a world*—and the expression of all worldly diversity—is an *affirmation* of the absolute.[71] What account, then, does Schelling provide for why nature involves the particular stages that it does? Why does the absolute affirm itself *as* first, second, and third potency, in both the natural world and the world of humanity? As I see it, there are three closely related reasons for this.

First: In order for the absolute to be *actual*, it must express itself in some manner; and this can only happen if the absolute—subject-object identity—manifests a preponderance of either objectivity of subjectivity (i.e., if it

exhibits itself as either nature or spirit).[72] According to Schelling: 'This is so because it [i.e., the absolute] is not actualised if subjectivity and objectivity *as* such are not posited. But since the two cannot be posited as such'—i.e., in utter disconnection from one another—'they might still be posited with quantitative difference.'[73] As we have seen, everything that *is* is an expression of subject-object identity; there is nothing that is *purely* subjective or *purely* objective. The potencies of nature have a preponderance of objectivity, yet there is nevertheless subjectivity at work in those potencies. Here we learn that, if reason is to express itself—and we already know that it must necessarily do so—it must also express itself as either nature or spirit. And this is because there only *is* absolute identity if the subjective and the objective are in some sense posited as different from one another (again, a difference in which subject-object identity remains). Now we understand why at least *one* potency—be it natural or spiritual—must necessarily exist.

Second: According to Schelling, if there is any possible way for the absolute to express itself, it will. 'No possibility is left unrealised in the universe; all that is possible is also real.'[74] In theological language—and we will address Schelling's theology in Chapter 3—he remarks: 'Everything that is possible by virtue of the self-affirmation of God [i.e., the absolute] will also immediately exist by virtue of it.'[75] It is not just that *something* necessarily exists; the existence of *everything that is* follows from this self-affirmation.[76] Schelling is an actualist—no possibilities go unrealized. This means that, not only will *either* nature *or* spirit be realised, but both will. And the same goes for the potencies within nature and within spirit; every rationally possible configuration of reason *must be*. Schelling's actualism is connected to his Parmenidean claim that *what is* does not *lack being* in any sense: 'That wherein all possibilities are actualities is necessarily of a nature that lacks nothing.'[77] A truly absolute being will not only necessarily exist, but every form to which it can possibly give expression will also necessarily exist.

Third: At key moments, Schelling suggests that *creativity* is essential to the nature of the absolute. We considered in Chapter 1 the way that Schelling differs from someone like Schopenhauer by implicitly identifying the rational and the creative: nature's rational self-determination is *productive*, and nature must be understood in terms of both those things that exist in nature and the productive activity that brings them into existence.[78] When Schelling considers the absolute's self-affirmation as the *universe*, then, this does not only mean that the absolute, or reason, affirms itself as a totality of *things*, but as an 'absolute creative force [*Schaffen*]'[79] or 'creative nature'.[80] As I see it, there is an implication in this that extends beyond accounting for the production of *things* and

has to do with the stages of nature: the potencies all *must be*, because the absolute is creativity itself; no general form of nature—no kind of being—will go uncreated.

This final point is underexplored and underemphasised in the years preceding the publication of the *Freedom* essay. In that text, the conception of the absolute as creative becomes central to everything Schelling thinks. Indeed, as I argue in the following chapter, the conception of creative identity advanced in that text allows Schelling to make good on his promise of developing a logic of emergence, in which the human spirit is shown to emerge, in some sense, from nature. We can see here, however, that prior to 1809, Schelling is already enthusiastic about explaining the material and organic diversity of the natural world with reference to a creative activity that does not issue from a person, but is simply being itself.

To the Hegelian, then, who wants to know *why* the first potency is raised to a second and a third potency, the Schellingian can respond as follows: *all* stages of nature—and all stages of spirit, for that matter—are explicable with reference to the fact that reason *must be* and it must affirm itself in every way that is rationally possible; it couldn't have been otherwise, since reason is absolute.[81]

We should note that, in this response, the relationship between the potencies appears to be less explanatory than their relationship to reason *as such*. This is a consequence of Schelling's way of thinking between the years 1801 and 1804; it is why—as we saw in Chapter 1—he insists on the 'simultaneity' of the potencies.[82] But in conceiving of the potencies as a series—and in conceiving of the higher potencies as intensifications of the lower—Schelling continues to suggest (as he did in the *Introduction to the Outline*, the *General Deduction*, and *On the True Concept*) that the lower potencies play some important role in explaining the higher, even though they are not *temporally* successive, appearing in time one after another.[83] Why else would he, time and again, begin presenting the doctrine of the potencies by elucidating the first potency? And—if we take a further step back—why else would he begin, time and again, with a consideration of *nature* before considering anything to do with spirit? In fact, prior to 1809, Schelling published very little having to do with spirit. And that is because the more advanced expressions of reason are unintelligible without first understanding their basis. It is not, however, until the publication of the *Freedom* essay that Schelling commits fully and unambiguously to the view that the higher forms are explained with reference to the lower. And this commitment on Schelling's part is connected to the fact that, in that essay, reason is understood in terms of creativity. We will return to these issues in Chapter 3.

**Magnetism, Electricity, and the Chemical Process**

We now have some sense of why Schelling thinks *there must be* a material world, and why that material world will necessarily express every configuration of subject-object identity possible. With this in mind, we can now turn back to the *Stufenfolge* itself and try to unpack what Schelling understands the second stage of nature to be.

Above, we saw that the first stage of nature—i.e., the first potency (A = B)—involves repulsion, attraction, and their unification in gravity (and this is why Schelling often identifies the first potency simply with gravity). Although the forces of nature constitute the most basic character of matter, they do not exhaust what matter is. Indeed, while a great deal about material bodies can be explained with reference to dynamics—their capacity to be moved upon impact, their position in space, their density, and their weight—things in nature express more determinacy than can be accounted for by the relationship between repulsion, attraction, and gravity. The second major stage of nature—i.e., the second potency ($A^2$)—involves the physical, qualitative features of matter that are inexplicable from the perspective of dynamics.[84] Schelling identifies these features of matter as the 'universal categories of physics': magnetism, electricity, and the chemical process.[85] In conceiving of these categories as matter 'raised to a higher power', Schelling argues that the subjective (or 'ideal') aspect of subject-object identity—the 'A' in 'A = B'—is intensified in such a manner as to realise a distinctively qualitative form of reality.[86] This is what he means when he describes the quantitative determinacy of material bodies as being potentiated into qualitative determinacy.[87] In turning his attention from dynamics to physics, then, Schelling is both turning to another stage or level of nature and arguing that this second stage is nothing besides the intensification of nature's most basic stage. In other words, Schelling is simultaneously insisting on the *difference* of the qualitative features of matter from the sheer quantitative features of matter and on their *identity*: the second potency is, in an important respect, different from the first potency, since '$A^2$' is 'A' *duplicated* with itself and therefore different from 'A'; yet it is, in another respect, the *same* as the first potency, since nothing new has been *added* to the first potency to arrive at $A^2$.

What does change, from first to second potency, is that the subjective element is intensified, so that subjectivity and objectivity appear relatively identical.[88] Since we remain here in the domain of nature, there continues to be an overall surplus of objectivity, but now subjectivity and objectivity appear to be equal, and this yields the most basic feature of nature's qualitative determinacy: magnetic polarity. In magnetism, the forces of repulsion and attraction are expressed within an *individual* body as its two poles. Thus, repulsive and attractive force are 'united in one and the same

identical subject' or natural product: a magnet.[89] The second level of qualitative determinacy—electricity—is a higher expression of this same magnetic polarity. Yet whereas magnetism expresses polarity within one body, electricity is a potentiation of that polarity as 'two distinct individuals'.[90] For Schelling, this means that the positive force of repulsion and the negative force of attraction must be sundered from one another, such that an electrically charged body is distinguished as either positively or negatively charged.[91] At the third level of qualitative determinacy, the positive and negative poles are reunited. Yet since this reunification of positive and negative is indeed a *re*unification—passing through the stage of electricity where products are *either* positively *or* negatively charged—this new stage cannot be a return to the more simple polarity of magnetism. Instead, this third stage is identified by Schelling as the chemical process, where qualitatively determinate products are unified *through* their difference from one another.

This final stage of inorganic quality is perhaps easier to comprehend if we recognise that on Schelling's view—and he was by no means alone in holding this opinion—chemical substances should be conceived of as either positive or negative substances, and the effects of their interaction are intelligible with reference to their positivity and negativity.[92] What happens in this interaction is significant. For in the chemical process, two qualitatively distinct products *unite* with one another, but in doing so, they do not create a product with intrinsic polarity (i.e., a magnet), but *dissolve* their respective qualities and make possible *new* chemical substances with their own qualitative determinacy. This occurs in both chemical combination and separation. Thus, the chemical process—a potentiated form of gravitational motion—leads to the dissolution of distinct, natural products through their intrinsic affinity for one another, their '[gravitating] toward each other'.[93] Unlike the phenomenon of electricity, in which positively and negatively charged products are related to one another with respect to their electrical charge alone and can therefore retain their substantial integrity after their charge has been neutralised, the chemical process involves products whose entire character *as products* is bound up in their relation to *other* products; indeed, this is why a product is entirely dissolved or returned to 'indifference' in the chemical process.[94]

The triplet magnetism/electricity/chemical process, therefore, does not constitute a cyclical return to unity, but a progressive series in which inorganic nature proves to involve three basic forms of inorganic organisation: internal doubleness (or polarity within identity); qualitative specificity (or identity *as* polarity); and qualitative specificity in which the *whole* product is entangled with that which is different, thereby leading to the dissolution of such specificity (or identity *through* polarity). It is important to keep in mind that, in discussing what we might call the logical structure of magnetic, electrical, and chemical phenomena, Schelling rejects all

explanations that refer to any 'special kind of matter'.[95] These are the 'universal categories of physics' because they are '*functions of all matter universally*.'[96] And this is why, in our experience, we never encounter mere matter-in-motion, but always matter with qualitative determinacy—maximally expressed in the chemical specificity of objects.[97] Material bodies *just are* qualitatively distinct. This is something that reductive philosophies of nature, which seek to explain all phenomena in terms of quantity alone, will always fail to make intelligible.

As we have seen, the development from sheer dynamism to the qualities associated with magnetism, electricity, and the chemical process is not achieved in time or on the part of particular phenomena undergoing metamorphosis. Potentiation is an ahistorical, rational development in which nature proves its necessary qualitative determinacy. For on Schelling's view, the immanent dynamism of matter, when reconfigured to exhibit identity and difference in three distinct ways, expresses itself as not merely quantitatively determinate (e.g., as specific weight), but as qualitatively distinct matter.

On my understanding, then, it is central to Schelling's thought that the reality of qualitative determinacy is affirmed and explained by the philosophy of nature. That being said, Schelling significantly revises his view of quality during the early years of his philosophy of nature. His most important interlocutor on this issue is Eschenmayer, who, to Schelling's disapproval, takes the dynamic construction of matter alone to account for all apparent material diversity.[98] According to Schelling, Eschenmayer's dynamic physics necessarily fails to account for natural diversity, since the play between repulsion and attraction *as such* only ever yields differences in '*degrees* of extension', i.e., strictly quantitative differences.[99] Certainly, Schelling argues, the specific weight or density of a given body can be determined with reference to the quantitative relation between repulsive and attractive force. But if the relation between forces—*as* mere forces—is all that one considers, then one cannot possibly account for the apparent qualitative determinacy that distinguishes one body from another. Thus, Schelling asks Eschenmayer:

> I would like to know how the specific weight of iron, for example, could be directly proportional to the considerable coherence of this metal, or how the specific weight of mercury could be directly proportional to the weak coherence of this metal? — Even through endless changes to specific weight — and [Eschenmayer] knows nothing of matter but this — nothing would ever change but the specific weight.[100]

In the *First Outline*, Schelling had attempted to account for qualitative determinacy by positing the existence of insubstantial 'dynamic atoms' or

'actants' (*Aktionen*) as the explanation of quality. While there is something compelling in this quasi-Leibnizian hypothesis,[101] it is presented in the *First Outline* as a merely regulative framework through which one can comprehend our experience of qualitative specificity in nature—not something that gets at anything *real* in nature.[102] And in response to Eschenmayer's critical assessment of the view, Schelling abandons it entirely in favour of a new theory of quality.[103] In the *Presentation*, he argues that the qualitative features of the natural world can be explained with respect to quantitative difference alone. He does not, however, mean that there are only differences of proportions of force; this would be to remain at the level of dynamics, and rejecting this reductive form of philosophy of nature is central to his own criticism of Eschenmayer. Instead, Schelling argues in the *Presentation* that the qualitative features of the natural world express the same rationality at work in the forces of nature, yet with a greater intensification of the 'subjective' element. It is therefore on the basis of a certain form of quantitative difference—i.e., a greater degree of subjectivity expressed in reason or subject-object identity—that nature proves to involve quality.

Although Schelling does not continue to insist so adamantly, after 1801, on his provocative idea that 'difference is simply not to be understood in any other way' than as quantitative difference[104]—that 'we can nowhere in the universe conceive of an essential or qualitative difference'[105]—there is nevertheless something in that thought that he does continue to champion at key moments in his subsequent texts and that remains central, in my view, to his distinctive nature-philosophical perspective for years to come. That is the idea that qualitative difference can be accounted for *without reference to negation*. Qualitative determinacy, for Schelling, is explained in terms of potentiation, in which being (or reason, or subject-object identity) is *duplicated* with itself and thus expresses to a greater degree the self-determining rationality *that being itself is*. As we will see, this is a key difference between Schelling's and Hegel's philosophies of nature, the latter of which substitutes a logic of self-negating negativity for the Schellingian process of self-duplication.

To clarify this point, it might be helpful to home in once more on the categories of physics themselves. Magnetism, electricity, and the chemical process, according to Schelling, are not, at bottom, *other* than one another; they are three ways that reason expresses itself qualitatively: as polarity within identity; as identity *as* polarity; and as identity *through* polarity. None of these ways of exhibiting identity is a negation of the others. In fact, there is no *essential* difference between these three categories, 'no intrinsic opposition' at play:[106] the categories are *continuous* with one another, such that it is not mistaken to think of them as a single (yet nevertheless differentiated) process. As Schelling puts it in a lecture

from 1832, referring back to his own, earlier philosophy of nature: 'magnetism, electricity and chemism' are 'three forms of one and the same process', and *for this reason*, they ought not to be 'called separately magnetic, electrical, or chemical, but should be addressed by the general name of the *dynamic process*.'[107]

So Schelling thinks that there is some kind of difference between the three elements of the dynamic process, but that those elements are not essentially *other* than one another. He also argues that the categories of physics are not qualitatively different from the first potency. Although they reveal the material world *to be qualitatively determinate*, the essential being of the categories of physics is the same as it was in the case of the fundamental forces: reason, the absolute, or subject-object identity. Furthermore, these categories do not arise through the negation of anything at work in the first potency. For Schelling, they arise through the sheer fact that reason must affirm itself in every way possible, and one possible way for reason to affirm itself is to intensify the subjective aspect of subject-object identity, such that qualitative distinctness appears in the material world.

As we will see, this same logic of potentiation is central to Schelling's conception of organic life, where magnetism, electricity, and chemical process are raised to the higher powers of sensibility, irritability, and formative drive. What the logic of potentiation allows for, then, is an account of nature's inner unity in which real differences obtain. Indeed, this is why Schelling can claim, on the one hand, that 'organic nature is nothing other than the inorganic repeated at a higher power'[108] and yet insist upon the *difference* between the inorganic and organic.[109] For Schelling, the self-potentiation of matter is a self-*differentiating* process resulting in distinct forms of nature that are irreducible to its more basic, ontologically antecedent forms. And yet each of these forms is an expression of one and the same thing: reason.

### Life: Between the Inorganic and Spiritual

One of the implicit lessons we can take away from Schelling's dynamic construction of matter is that his opposition to mechanistic philosophies of nature is not pursued from the perspective of vitalism, which understands the inorganic in terms of the organic. This point is central to interpreting idealist philosophy of nature, since too often this period of nature-philosophy is assumed to be 'organicist' in a strong sense, as if the Schellingian alternative to Newtonian dualism and French materialism were to simply conceive of nature as fundamentally *living*. It is important, therefore, to emphasise the fact that, although Schelling does, at times, use organicist language to describe the activity of nature more broadly, his

system—taken as a whole—in no way underplays the ontological integrity and even priority of inorganic phenomena, phenomena which must necessarily precede the emergence of living things. This is why it is only at the *third stage of potentiation*—after the strictly quantitative dynamics and qualitative physics—that life, properly speaking, comes on the scene in Schelling's system. As a higher and ontologically derivative potency, life simply cannot be foundational for Schelling.

While I am by no means the first to make this point, it is one that, it seems to me, remains underappreciated in Schelling scholarship. Taking a look at two of Schelling's closest and most insightful readers may help to bring out the significance of this issue. Consider, first, Snow's interpretation of Schelling's philosophy of nature in *Schelling and the End of Idealism*, which is largely focused on the admittedly organicist *On the World-Soul*. Snow writes:

> Higher levels of development in nature, such as life, are inadequately understood if they are conceptualized as being a less complex level of nature (such as matter) plus a *qualitas occulta*, such as vitality. Obviously the proper method would be to understand the lower levels in terms of the higher ones.[110]

As an interpretation of *On the World-Soul*, this is entirely fair. In that text, Schelling does suggest that mechanism must be understood in terms of organicism, the latter of which is more metaphysically and therefore explanatorily basic.[111] But while Schelling quickly abandons this view—it is no longer central to his thinking from 1799 on—Snow's interpretation of Schelling's thought as a whole tends to rehearse this same organicism of 1798. Snow emphasises Schelling's interest in physiology and medicine—over and above his interest in, for instance, chemistry;[112] she takes Schelling to operate with an 'understanding of nature as dynamic *and living*';[113] and she describes the activity of the philosopher or scientist to be 'part of an organic totality'.[114] Comments stressing the connection between the organic and Schelling's philosophy of nature are by no means unique to Snow; they are encountered throughout Schelling scholarship. But they suggest—wrongly, in my view—that after 1798 Schelling remained committed to the organicism of *On the World-Soul*, in which it is suggested that we can only understand nature from the perspective of, or within the framework of, life. To be sure, we improperly understand the structure of life if we conceive of it as inorganic matter that has somehow been endowed with a vital force; on that first point raised in the quote above, Snow is absolutely right—and this is representative of Schelling's perspective long after 1798. But it does not follow from this first point that we ought to understand matter in terms of life. We need not—and on my

view, Schelling ultimately does not—understand the inorganic in terms of the organic. On the contrary, he describes life as *higher*, in part, because it is only intelligible with reference to that upon which it is based, i.e., the lower: matter-in-motion. Indeed, although Schelling makes seemingly organicist comments throughout his nature-philosophical texts, the thrust of his thinking goes against such organicism. The logic of potentiation requires that (i) matter—the 'prime existent'—*is not alive*; and (ii) those particular natural organisations that *are* alive (i.e., living things) are only fully intelligible with reference to the inorganic forces that undergird their existence. All attempts to understand the lower in terms of the higher are therefore at odds with the Schellingian system of emergence.

Beiser also describes life as the central concept that allows Schelling to grasp the intrinsic unity of all natural phenomena. According to Beiser:

> The difference between the organic and inorganic is … only one of degree … Both are one and the same substance—*living force*—that has developed and organized itself in different degrees, first as the inorganic phenomena of matter and then as the organic phenomena of life.[115]

Like Snow, Beiser rightly points out that there must be *some* difference between the inorganic and organic. As he notes, Schelling's philosophy of nature must provide some account of this difference if it is not to reduce the organic to the inorganic or vice versa.[116] And Beiser goes on to argue, as I have above, that the concept of 'power' or 'potency' allows Schelling to account for such difference without sacrificing the ultimate immanence of all natural forms:

> With the concept of potency Schelling finally arrived at his middle path between dualism and materialism. There is no dualism since the higher potency includes and presupposes the lower; but there is also no materialism because, as a greater degree of organization and development, the higher potency cannot be reduced down to the lower.[117]

But then Beiser goes on to interpret the material base of the potencies as a substantial, *living force*: 'The middle path is based on the potencies differing only in form *but not in content or substance*: they are only different kinds of manifestation of one and the same thing, namely, *living force*.'[118] Despite his recognition that Schelling's logic of potentiation is meant to circumvent all reductionism in the philosophy of nature, Beiser's interpretation ends up reducing the ontologically distinct levels of nature to various degrees *of life*. Such a reading, it seems to me, begins to vindicate Hegel's concerns about Schelling and the night in which all cows are

black, as if—*for Schelling*—the distinction between the living and the non-living is lost in a wash of sheer vitality.[119]

The way we interpret Schelling's conception of life is significant on its own terms, but it also has consequences for how we interpret his conception of the relationship between nature and spirit. Beiser's reading is again illustrative. (And, again, it is important to keep in mind that Beiser is clear that, in seeking to understand the inner unity of all things, Schelling is also at pains to avoid reductionism).[120] According to Beiser, Schelling unifies nature and spirit by extending life to *every* domain of being, such that inorganic nature and spiritual freedom are, at bottom, expressions of organic life.[121] In a paper that (rightly) considers Schelling's and Hegel's philosophies of nature as part of the same more general project, he writes:

> [Schelling and Hegel] see the concept of life (*das Leben*) as the mediating concept between the subjective and the objective. The thesis of subject-object identity then means that the subjective and objective are simply different degrees of organization and development of a single living force. The subjective is the internalization of the objective, the objective is the externalization of the subjective. Or, as Schelling once put it, 'spirit is invisible nature, and nature is visible spirit.'[122]

Schelling did put things this way in the *Ideas*, and that sentence—perhaps more than anything else Schelling wrote—presents difficulties for the interpretation I am proposing in this book (as I discussed in Chapter 1). But when we look at Schelling's philosophy of nature as a whole—and when we look at the details of his system—it seems to me that it is ultimately untenable to claim that spirit and nature, for Schelling, are simply two aspects of life. As I see it, such an organicist interpretation of idealist philosophy of nature misses out on the unique manner in which life unifies nature and spirit. For Schelling—and for Hegel, too—life unifies nature and spirit insofar as it is the ontologically distinct form of nature that immanently leads to the human spirit, the latter being distinct from both inorganic and organic nature. In this way, the philosophies of nature explored in this book amount to strongly anti-reductionist systems in which inorganic processes are shown to undergird the existence of organic life, an ontologically derivative existence that in turn undergirds the existence of spirit. This, it seems to me, is a central feature of Schelling's logic of potentiation, and to get it into view we must set aside the idea that life unifies nature and spirit by being their primordial identity or point of indifference.

My interpretation of Schelling as an 'anti-organicist' takes its inspiration in large part from Grant, who has single-handedly brought Schelling's understanding of non-living and non-human nature to the fore in contemporary Anglophone scholarship. As Grant persuasively argues, we

fundamentally misunderstand Schelling if we interpret him as taking the 'organism [as] the dominant paradigm of all physics'.[123] Importantly, the point for Grant goes beyond Schelling interpretation and gets at the very possibility of a philosophy of nature that does not, in the end, revert to some form of practical philosophy:

> Postkantian philosophy has repeatedly reverted to organism, to the phenomena of *life*, precisely to head off naturephilosphical incursions … Life acts as a kind of Orphic guardian for philosophy's descent into the physical. This is because life provides an effective alibi against accusations of philosophy's tendency to 'antiphysics', while centralizing ethico-political or existential problematics as philosophy's true domain.[124]

I agree entirely with Grant here: any philosophy of nature worthy of the name ought to begin in abstraction from anything practical, and this includes the exigencies of non-human life.[125] I likewise agree with his argument that Schelling, at least when he is at his most consistent and compelling, is no organicist. But Grant goes too far, in my view, in downplaying the significance of life for Schelling. While the fundamental level of nature is not organic, for Schelling—and while nature-philosophical explanation must, therefore, descend further than life in order to get at the basis of *what is*—Schelling does think that the activities of life are distinctive and worthy of reflection beyond simply tracing their origin to and affirming their ontological continuity with inorganic processes. The organic is a higher potency, and this means that something *different* goes on with organisms than what we see in rest of nature.

In a telling remark, Grant claims that a passage of Schelling's, in which life and humanity are described as the crowning achievement of nature's progressive development, is a 'relatively rare' instance, on Schelling's part, of promoting a linear conception of nature's activity.[126] Yet the passage from the beginning of the *General Deduction* Grant goes on to cite as evidence of Schelling's non-linear and non-hierarchical conception of nature's development again describes the organic as a *higher power* of inorganic nature.[127] And at the end of that same text, Schelling claims that inorganic nature 'lacks … the *final act* of potentiation', which only arises in the human person—that creature through which nature attains its highest standpoint.[128] Such comments are entirely of a piece with the supposedly unrepresentative remark of Schelling's that 'the organism in general, and the human in particular, is the crown and blossom of the world.'[129] The hierarchical picture, it seems to me, is both unavoidable as an interpretation of Schelling and central to the compelling vision he has to offer contemporary metaphysics.

Thus, while Grant helpfully illustrates that 'organism—or organization—results simply from matter acting on its self-construction, or from increasingly complex organizations of the inorganic', his suggestion that there is no 'highest product' minimises the extent to which nature differentiates itself in potentiation. And in this way, Grant's anti-organicist reading is similar to the organicist readings of Snow and Beiser. In each case, an implicit reduction of the potencies to a single potency obscures from view Schelling's emergentism, which marks out a distinctive metaphysical perspective in which inorganic nature is understood to be ontologically primary and yet a cause of distinctively organic and, ultimately, spiritual forms of reality. To be sure, Schelling conceives of the inorganic, the organic, and the spiritual in terms of varying degrees of one and the same thing (and, in Part II below, we will consider Hegel's critique of this quantitative conception of the difference between the levels of reality); but these are not varying degrees of inorganic-dynamic complexity, living force, or spirit. Each of these is, rather, an expression of *reason* or the absolute. The progressive and, indeed, hierarchical development from nature to spirit, for Schelling, is one of increasing rationality. And it just so happens that attending such increases in rationality are different forms of reality: inorganic processes, living things, and human beings.

Let's focus now on the relationship between inorganic and organic nature, or the potentiation of nature to its third potency, prior to the transition to spirit. Schelling does not think that organic nature is substantially different from inorganic nature, because he does not understand the levels of reality to involve different *substances*.[130] An organism is, however, distinct from inorganic nature on account of the activities that organisation realises: the activities of sensing the surrounding environment, responding to that environment, and reproducing one's own organisation. Sensibility, irritability, and the reproductive or formative drive (*Bildungstrieb*) are, according to Schelling, the distinctively organic activities of nature, in which magnetism, electricity, and chemical process have been raised to a higher level.

With these activities of life, we see emerge a distinctive form of inner purposiveness, which Kant famously discusses in the third *Critique*. For Kant, a living thing is judged as having parts that are constituted by its own activity, and these parts serve the living thing's own ends. This is importantly different from those natural entities judged to be externally purposive, such as soil, air, and water, which are taken to be purposive only insofar as they are means to an organism's end.[131] Now, for Kant, even phenomena that are judged to be internally purposive are only internally purposive *for us*; teleological judgements are based on a regulative as opposed to constitutive principle.[132] And it is worth noting that this further removes the transcendental subject from cognition of nature as

it really *is*: not only do objects of experience conform to our *specifically human* forms of intuition, as is the case for inorganic nature, on Kant's view, but our knowledge of the organism is even more relative or 'subjective', since life only ever appears to us *as if* it were internally purposive.

While Schelling rejects this Kantian restriction on our capacity to understand the nature of life as it is *in itself*, Kant's description of the self-organisation of life in terms of inner purposiveness has a significant influence on Schelling's philosophy—as it did for so many contemporaneous philosophies of life. Whereas inorganic nature is, as a whole, self-causing, any individual material body is produced by some process that *differs* from that body. To be sure, matter is immanently mobile and actively involved with other matter, e.g., in gravitational motion, electrical discharge, and chemical processes. But despite this immanent activity, inorganic matter does not *cause* itself as do 'organic forms' which are 'reciprocally means and end':[133]

> Every organic product carries the reason for its existence in *itself*, for it is cause and effect of itself. No single part could *arise* except in this whole, and this whole itself consists only in the *interaction* of the parts.[134]

Each organ and organic system (nervous, nutritive, respiratory, reproductive) within a whole organic life *is* and is *maintained* for the sake of that whole. Inorganic bodies do not seek to maintain their individual character, and this is because such bodies are unlike organic bodies in an important way: whereas the inorganic body does not intentionally oppose itself to its surrounding environment, 'the organism is everything that it is only in opposition to its outer world'[135] and the maintenance of this opposition is the maintenance of the life of the individual, i.e., the refusal on the part of life to pass over, as a mere chemical process, into indifference.

Above, we considered how both gravitational motion and the chemical process signal the tendency of inorganic matter to seek 'indifference' or unity with all other matter. We are now in a position to see why this 'drive to indifference' distinguishes inorganic nature from life. For the organism—so long as it remains alive—is nothing less than the active refusal to return to material 'indifference', a striving *against* the chemical process wherein individual determinacy is lost.[136] We can now also see more clearly why Schelling's system requires us to distinguish the organic from the inorganic. For Schelling, the philosophy of nature must not only demonstrate the specificity of the non-mechanistic combination and separation of chemical substances,[137] but it must also show how the life process is neither mechanical *nor* chemical, but distinctively biological in its striving for individuality. Hence Schelling's affirmation of the vitalist view of life as 'something *sublime*, *beyond the chemical*', a view which 'infinitely

tower[s] over [that of] the chemical physiologist', despite the fact that the vitalist is utterly misled in understanding this sublime transcendence of chemical process as dependent upon a mysterious, vital force.[138]

What does life depend upon if not such a force? The inorganic natural processes from which it differs in precisely the way just discussed. This is what it means to conceive of the activities of the organism as higher potencies of sheer matter, and it is one of the key ways that Schelling advances beyond Kant's dualistic philosophy of nature, in which no explanation for life is possible—no development from the inorganic to the organic.[139] For Schelling, living things are distinctive natural entities in that they seek to maintain their own individuality through a series of uniquely end-oriented activities, and these activities—through which an organism comes to be—are explained with reference to the self-differentation of inorganic nature. 'Sensibility is only the higher power of magnetism; irritability only the higher power of electricity; formative drive only the higher power of the chemical process.'[140] Just as with the development from the first to the second potency, there is a process of differentiation here without any 'gap' between second and third potency. 'Nature … makes no leap … nothing which *comes to be* in nature *comes to be* by a leap; all *becoming* occurs in a continuous sequence;'[141] 'In nature there is a continual determination of figure from the crystal to the leaf, from the leaf to the human form.'[142] 'Earth itself becomes animal and plant, and it is precisely the earth evolved into animal and plant that we … perceive in organized entities.'[143]

As we will see in Part II of this book, for all of their similarities, Hegel explicitly rejects this Leibnizian principle that Schelling takes up with such enthusiasm. And this is because Hegel understands the process of nature's development as one motivated by nature's intrinsic negativity, making the 'leap' from one stage to another a necessary consequence of nature's ontological asunderness—a notion quite distinct from Schelling's conception of nature as a fully rational whole that is productive of ever increasing rationality. Nevertheless, Schelling's insistence upon the gapless character of the development from inorganic to organic nature should not be interpreted as a reductionism of any kind: the inorganic develops *into* the organic in a continuous fashion, because the powers distinctive of life are inorganic powers that have become reconfigured so as to be productive of a teleologically structured individual. The continuous process that leads from inorganic to organic nature explains the existence of distinct forms that cannot be understood in terms of inorganic force, their ultimate source in nature.[144]

### Sensibility, Irritability, and Formative Drive

Schelling's investigations into the nature of life were central to his nature-philosophical programme from the start. He projected a third book of

the *Ideas* to cover organic life and physiology in particular,[145] and he first attempted to give an account of the structure of life in *On the World-Soul*. It is with the *First Outline*, however, that Schelling claims to have hit upon 'the essence of the organism'.[146] According to Schelling, 'the organic formation happens only through the mediation of the *process of excitability* [*Erregbarkeit*].'[147]

Schelling takes up the concept of excitability from John Brown, a Scottish physiologist who had enormous influence on nineteenth-century German medicine and Romantic science more generally.[148] According to Brunonian physiology—made attractive to Schelling by way of Röschlaub's rationalist interpretation of Brown[149]—organic life is characterised by an active responsiveness to the external world. The organism, on this view, is neither a purely spontaneous nor passively receptive individual, but an individual that actively responds to external stimulation. In other words, excitability is the ability to act in and upon an external world to which one is originally receptive. Significantly for Schelling, this model of life allows one to conceive of the organism as both passive and active in relationship to that which differs from it. By identifying the concept of excitability as the 'essence of the organism', Schelling seeks to avoid the limited standpoints of reductive physicalism (which understands life in terms of pure passivity) and mysterious vitalism (which understands life in terms of pure activity). Taking Brown's concept of excitability as the inner unity of organic receptivity and activity, then, Schelling is able to conceive of the organism as both receptive and active, i.e., as a fundamentally 'excitable' individual.[150]

As Nelly Tsouyopoulos has argued, Schelling's fundamental contribution to the theory of excitability regards his conception of health as a perpetuation and reproduction of the organism.[151] According to Brown, the health of an organism is dependent upon a balanced state of excitement from external stimuli. Illness ensues when the activity of an organism is either insufficiently stimulated (resulting in the depletion of excitability in the 'asthenic' illnesses) or overly stimulated (resulting in the excess of excitability and, in extreme cases, depletion again).[152] What Schelling contributes to this theory is the idea that the equilibrium of excitability sought by the organism allows that organism to continually reproduce itself anew (and ultimately to reproduce its kind in the form of another individual)—hence the appropriate Brunonian identification of equilibrium with 'health'. In Schelling's words, 'The excitability of the organism presents itself in the external world as a constant *self-reproduction*.'[153] The balance between activity and receptivity, therefore, is essential for the organism to be the self-reproducing being that it is, i.e., it is essential if the organism is not to become ill and die.[154] Insofar as the healthy organism is self-reproducing or self-causing, it is 'its own object'.[155] And by actively relating to itself as an object, the organism proves to be both subjective

and objective. This is how Schelling ties Brown's theory of excitability to the Kantian conception of the organism as cause and effect of itself.

As both the subject and object in the process of maintaining organic equilibrium, the organism exhibits a distinctively teleological form of polarity.[156] In order to see this, we need to consider the 'most original factors of excitability':[157] sensibility and irritability, each of which is a unique type of interaction between the subjective and objective elements of life. In the *First Outline* and the *General Deduction*, Schelling understands sensibility to be the more basic of the two and as a potentiation of magnetism because it, like magnetism, is an 'originary doubleness'.[158] The sentient organism is both subject and object in that it subjectively *feels* its objectified *self*, and there is no *separation* between the self that does the feeling and the self that is felt in sensation.[159] Because sensibility involves this immediate identity or coincidence of subjective and objective aspects, it is the organic expression of magnetism, where positive and negative force are always present in the individual magnet.

But sensing the world beyond them is not all organisms do; they also act in response to the world they sense. And their capacity to experience makes that action possible. Thus, Schelling identifies sensibility as 'the inner condition of organic movement', the 'source of organic activity.'[160] Sensibility allows the organism to become agitated to act, which Schelling identifies with the physiological concept of 'irritability', the second necessary feature of excitability. The development from sensibility to irritability is perhaps easiest to comprehend with reference to the 'organic equilibrium' that is disturbed insofar as the organism is open to its environment (sensibility).[161] Through its irritability, an organism seeks to restore the equilibrium between passivity and activity that characterises its existence as a living thing.[162]

Schelling identifies irritability as the potentiation of electricity. In part, this is because the irritable 'restoration' of organic equilibrium is analogous to the neutralisation that results from electrical discharge. Moreover, whereas magnetism and sensibility are seen—at least in the *First Outline* and the *General Deduction*—as exhibiting *simultaneous* polarity (or 'difference in identity'), electricity and irritability are expressions of sundered polarity, in which something achieves its distinctive identity in exhibiting either positivity or negativity. In the case of irritability, this is seen in the '*alternation* of expansion and contraction' that defines the responsiveness of the muscular system to the environment.[163] Finally, the galvanic experiments of the late eighteenth century confirmed for Schelling the intrinsic connection between electricity and the spontaneous motion of life.

Importantly, the organism would not be alive if it did not actively *do* anything. A great deal of what living things do is seek out nourishment in order to grow and reproduce themselves. Thus, in restoring the equilibrium

between the passive and active aspects of life, irritability also makes possible the self-reproduction of the living thing—this, after all, is what health *is*: the organism's ability to continue its existence. For this reason, the irritable, 'self-production of the organism' is in a sense a 'force of reproduction'.[164] And therefore, according to Schelling, 'Irritability must pass directly into formative drive',[165] expressed as a technical or creative drive (*Kunsttrieb*) under certain environmental and physiological conditions but expressed throughout the organic sphere as self-nourishment and sexual reproduction.[166]

For the Schelling of the *First Outline* and *General Deduction*, the organism's drive to reproduce its kind is the highest form of purposiveness in nature, and this can be seen in the way the formative drive exhibits the logic of the chemical process yet raised to a higher level. While chemical processes are in some sense productive—making possible new material products through chemical combination and separation—the organic productivity is 'a still higher kind than the merely chemical'[167] on account of the fact that organic production *maintains* the life of the species. Sexual reproduction does not signify the *dissolution* of the original product as does the chemical process; rather, the reproductive process results in the *continuation* of the original product *as a new* product: the individual is perpetuated as *another* individual, a process that is made possible on the basis of sexual difference.[168] Thus, with the reproductive process, the organic realm proves to involve a novel form of the chemical 'identity *through* difference' discussed above. In the reproduction of itself as another individual life, an organism continues its own identity in another product.

Schelling's claim that the three activities of life constitute a continuous series should now be clearer. And taking this series as a single, organic process, we see that, within each activity of life, the organism exhibits a novel configuration of the identity-difference relation at work in magnetism, electricity, and the chemical process. Schelling does not claim to be the first to suggest that sensibility, irritability, and formative drive are intrinsically connected to one another. On the contrary, his account here draws upon key nature-philosophical concepts developed by Sömmering, Blumenbach, Herder, and Kielmeyer.[169] Schelling sees his own contribution to the theory of life to be his explanation for the way one organic activity develops into the next.[170] In other words, what is lacking prior to Schelling's intervention is an account of the rational development that leads from the more basic to more complex activities of life.

It is worth spending a moment to consider the significance of the fact that, according to the *First Outline* and *General Deduction*, the third potency culminates in the formative or reproductive drive. This helps us to see that life is not only 'higher' than inorganic nature on account of its ontological

dependence on the latter. The organic is also 'higher', because it expresses more fully nature's primordial productivity. Indeed, the organism is not only a product of nature's productivity, but an individuated form of production itself, and thus a more complete expression of nature's own subjective activity.

Putting things this way, however, suggests once more an organicist interpretation of Schelling's philosophy of nature. Indeed, it now seems as though the individual organism is somehow better than inorganic products are at expressing what nature *as such* is. Above, I argued that, for Schelling, there is an important difference between nature and life, the latter of which is only one domain within the natural world—and an ontologically derivative one at that. But if the organism exhibits more fully than inorganic processes the subjective activity at the heart of nature, does this not imply that nature *as such* is more similar to *life* than it is to the non-living? It may seem that way, and so it is important to define in more certain terms the manner in which life—as a distinctive stage of nature's development—differs from nature *as such*. In order to do so, we need only recall that the organism is 'an indirect effect of external, impinging influences'.[171] The excitability that defines organic life is only possible insofar as the organism is responsive to an environment with which it is not identified; a separated existence from the organism's surrounding is a necessary condition for the possibility of life. By contrast, nature *as such* is not an individual acting in a world; it isn't an individual at all.[172] And it isn't *provoked* into productivity by something *else*. No 'external world' compels nature to act.[173] Rather, nature (*natura naturans*) *just is* primordial, creative force.

This distinction between nature's original productivity, on the one hand, and the derivative productivity of an individual organism, on the other, has important consequences for the kind of products that result in each case. Nature *as such* is unlimited in its powers of production; it is an absolutely creative impulse from which all possible forms necessarily emerge. The organism exhibits a far more limited form of production: it only ever reproduces its own form—a form that appears as the organism itself or in the next generation.[174] As Schelling remarks, this 'does not mean that it absolutely stops being active, but that it is limited with respect to its productions; it cannot reproduce anything to infinity except *itself*.'[175] Thus, while it is true that Schelling understands living things to be productive and, in this way, to be similar to nature *as such*, it would be mistaken to think that he is for this reason conceiving of nature on the model of the organism. On the contrary, because the organism, according to Schelling, only channels the creative power of nature to a limited extent, it would be confused to think that he is understanding nature from the perspective of life.

In an essay published in 1805—the *Preliminary Characterisation of the Standpoint of Medicine According to the Fundamental Principles of the Philosophy of Nature*—Schelling notes that the presentation of the organic series that appears in the *First Outline* and the *General Deduction* is erroneous. Reproduction is not the higher potency of the chemical process, nor does it follow sensibility and irritability in the atemporal, rational development of organic activities. Röschlaub was right, Schelling remarks, to associate reproduction, or the formative drive, with magnetism rather than chemistry.[176] Schelling's own presentation of the corrected organic series—in which sensibility and the formative drive have changed places—can be found in the 1804 *System of Philosophy in General and of the Philosophy of Nature in Particular*. Briefly going over this revised account of the third potency will put us in a position to consider, in the following section, Schelling's understanding of the fundamental forms of life.

Reproduction, according to the Schelling of 1804, is the first in the series of organic activities. It is magnetism raised to a higher power, because it—like magnetism—involves the 'continuation of the self … either as individual (in growth, etc.) or as genus (in procreation)'.[177] Since 'the individual does not … go beyond itself'[178]—it only ever nourishes *itself* and reproduces *its kind*—it exhibits the form of identity characteristic of magnetism, where polarity is present *within* the magnet. Irritability is again associated with electricity, since in both electrical charge and the activity of the muscular system there is an essential relationship to that which is *different*.[179] In the case of irritability, this difference is encountered in the external environment through which the organism moves. Finally, sensibility is now understood as the highest activity of life. And that is because sensibility, Schelling argues, unites reproduction and irritability:

> In the first [i.e., in reproduction], the organism was productive, but only of itself, without going beyond itself. In the second [i.e., in irritability], it took up the possibility of other things into itself, but as other things, i.e., with difference. The *synthesis* will be the following: that, as in the first dimension, the organism is productive, but productive of other things *qua* other, in such a way that these things, *qua* other, are nonetheless within the organism. As is easy to see, this synthesis is only achieved by the organic being becoming *intuitive*, perceptive. The organism does not go beyond itself in perception; intuition falls within the organism itself and yet is at the same time the intuition of other things, things external to the organism.[180]

In relating to things that are *other* than it—and yet *sensing* them, i.e., experiencing them *as its own sensations*—the organism exhibits the highest and

most sophisticated configuration of identity and difference. This is similar to the chemical process in the following way: in chemical interaction, one substance is *thoroughly* related to another—not superficially (as in electricity) but throughout the whole of what the substance *is*. Likewise, in sentient life, an organism's entire existence is constituted by *experience*, and this experience is always the experience of that which is *outside* the organism.[181]

As we will see, this reconceptualisation of the organic series allows Schelling to elucidate the relationship between the major forms of life: plants, infusoria, animals, and human beings.

## Kinds of Life

According to Schelling, life is not only graduated in the sense that an individual's essential physiological activities constitute a rational series of distinctively organic moments or stages. Additionally, the different *kinds* of life on earth are also understood to constitute a graduated sequence. Influenced by Herder and Kielmeyer, Schelling argues that each particular kind of life is the life-form it is on account of the proportion of formative drive, irritability, and sensibility it exhibits.[182] Because the activities of life are universal, all living things exhibit some degree of each activity, even if, in certain cases, the degree to which an activity is present is so minimal that the organism does not appear to in fact exhibit such a power.[183]

The formative or reproductive drive—which Schelling understands in 1804 as magnetism raised to the third potency—is expressed most powerfully in plant life. Schelling claims that plants do not go *beyond* themselves;[184] despite their minimal powers of irritability and sensibility, they neither relate to the external world through locomotion nor do they have a substantive experience the external world. Instead, plant activity is largely reproductive: in their activity of self-nourishment, plants grow and thereby reproduce themselves. And such reproduction is, likewise, self-contained. Just as the magnet does not require anything beyond it in order to exhibit polarity, so too the plant is internally differentiated so that it need not relate to another member of its species in order to perpetuate itself.

Irritability (a term Schelling remarks, in 1804, is somewhat misleading, since he really has locomotion in mind)[185] is expressed to its highest degree in infusoria, a category of life that, during Schelling's time, referred to a broad range of microscopic organisms. According to Schelling, infusoria have an indeterminate form or shape and, therefore, do not reproduce their form to an especially high degree;[186] they are also without much perceptual power. Yet infusoria are 'nonetheless capable of the fastest movement, sometimes through extremely resistant media.'[187] And because these media are *other than* the organism, the latter's movement is characterised by *difference*: infusoria do not tend to reproduce their *own selves*, and they

do not perceive the external world and make it their *own* through feeling; instead, they simply act in a world that is *different* from them.

Finally, the form of life that exhibits a greater degree of sensibility than it does reproductive force or irritability is the animal. The animal reproduces itself, yet to a far more limited extent than we see in the plant. Upon maturity, an animal stops growing, and its offspring are relatively limited in number. It has the capacity to move from one place to another—and so exhibits a greater degree of irritability than we see in the plant—yet the movement of infusoria exceeds the movement of animals. What characterises the life of an animal is its inner experience. The animal perceives the world around it, and its perceptions are entirely its own: perceptions are perceptions of something *other* than the animal, but they exist within the sentient organism itself, animating its inner life.[188] Because sensibility, or perception, involves self-identity achieved on the basis of a relationship to the external world, the animal's high degree of sensibility realises a unity of the 'identity' involved in reproduction and the 'difference' involved in irritability.

One of the challenges of interpreting Schelling's account of the essential forms of life is that he operates with two distinct, yet related, ways of thinking about these forms as sequentially ordered. On the one hand, he presents the forms of life in a linear fashion, as a series that corresponds to the development from reproduction to irritability and sensibility. The presentation of the life-forms therefore begins with plants—in which reproductive force predominates—and goes on to consider infusoria and then animals, in which irritability and then sensibility predominate. This linear model is depicted in Figure 2.1 below.

On the other hand, Schelling remarks that, as the midway point between plants and animals, infusoria should be understood as the 'common starting point' of plant and animal life, their 'origin in the indeterminate world'.[189] Indeed, since infusoria lack the form of determinate individuality but nevertheless move themselves throughout their inorganic environment, they lay the ground for the more determinate forms of organic

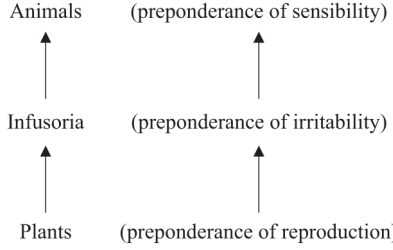


*Figure 2.1* Linear model of the general forms of life.

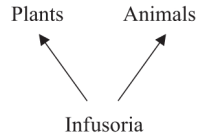


*Figure 2.2* Bifurcated model of the general forms of life.

existence achieved by plants and animals. This is a creature that might best be understood on the border of life itself, as it 'lies in the middle between the potential and actual organisation of matter'.[190] Thus, Schelling argues, infusoria occupy the indifferent basis of *two different* series of life forms: a series of *vegetal* forms, in which reproduction becomes increasingly powerful as the series progresses; and a series of *animal* forms, in which sensibility becomes increasingly powerful as the series progresses.

From this perspective, the animal kingdom does not arise (atemporally) from out of the plant kingdom, with infusoria as a point of *mediation*—as might be implied by Figure 2.1 above. Instead, both plant and animal kingdoms emerge from a more basic form of life, as depicted in Figure 2.2. This figure, no less than the first, demonstrates something essential about Schelling's philosophy of life as it is described in 1804. He is thus operating with two different ways of thinking about the sequence of life, and these two models of organic development—while not contradictory—are nevertheless in some amount of tension. The tension between these two models of the sequence of life-forms is representative of a more general tension in the early philosophy of nature, a tension between, on the one hand, Schelling's interest in the strictly rational, atemporal system of stages that nature is, and, on the other hand, his interest in the historical production of natural forms. We therefore get a glimpse of the philosophical importance of the *historical* development of nature in Schelling's discussion of infusoria as the 'middle point' of life—a middle point that is not only halfway along the path from plant to animal, but the historical *ground* of both plant and animal kingdoms. Schelling's journey to conceiving of emergence along historical lines is a long one, and it is not until the *Ages of the World* that he fully embraces the view that nature's history ought to be taken seriously by the philosopher of nature; yet here, in the *System* of 1804, we see once more this tendency in Schelling's thought, suggestive of the philosophical significance of nature's history.[191]

There is one final form of life that Schelling discusses in the 1804 lectures, a form of life that depends upon the three forms that came before. That life-form is the human organism. Although it is not a 'pure spirit'[192]—i.e., although it is, in certain respects, natural—the human requires consideration that

will bring us beyond the philosophy of nature. For this is a creature that, through its physiological structure, transcends the merely natural. In the following chapter, we will consider Schelling's conception of the human organism and its emergence from nature.

## Notes

1 Johann Wilhelm Ritter introduced Ørsted to Schelling's philosophy of nature. See Michael Friedman, 'Kant—Naturphilosophie—Electromagnetism' in *Hans Christian Ørsted and the Romantic Legacy in Science: Ideas, Disciplines, Practices*, ed. Robert M. Brain, Robert S. Cohen, and Ole Knudsen (Dordrecht: Springer, 2007), p. 138.

2 See Grant, who argues that the tendency to promote discussions of nature from the history of philosophy only insofar as they may resolve problems in the contemporary sciences is 'not only anachronistic' but 'also positively reduces, as Popper recommends, philosophical interventions into nature to a theoretical resource to be raided as and when the natural sciences deem it necessary.' Grant, *Philosophies of Nature After Schelling*, pp. 10–11.

3 See, for instance, *SW* I/4: 92; *On the True Concept*, p. 54 and *SW* I/5: 323; *On University Studies*, p. 122. I have discussed the role of philosophical insight in the non-philosophical sciences in Berger, 'The Science of All Science and the Unity of the Faculties'.

4 Isaac Newton, *The Principia*: *Mathematical Principles of Natural Philosophy*, trans. I. Bernard Cohen and Anne Whitman (Berkeley: University of California Press, 1999), p. 416.

5 See *SW* I/2: 192; *Ideas*, p. 154.

6 *SW* I/3: 4; *First Outline*, p. 3. *SW* I/3: 274; *Introduction to the Outline*, p. 195.

7 See Schelling's description of Le Sage's account of gravity in the *Ideas* and the *First Outline* (*SW* I/2: 207; *Ideas*, p. 166 and *SW* I/3: 96; *First Outline*, p. 73), an account largely dependent upon the 1794 German translation of Pierre Prévost's *Origine des forces magnétiques* (1788). For a detailed explanation of Le Sage's theory of gravity, its historical motivation, and its reception, see Frans van Lunteren, 'Eighteenth-Century Conceptions of Gravitation' in *Hegel and Newtonianism*, ed. Michael J. Petry (Dordrecht: Springer, 1993), pp. 357–360.

8 *SW* I/3: 98–99; *First Outline*, p. 74.

9 On Le Sage's appeal to Newton's dualism in order to fully account for the reality of material motion, see van Lunteren, 'Eighteenth-Century Conceptions of Gravitation', p. 359.

10 The same pattern recurs throughout the mechanistic philosophies of the Enlightenment. In *Man a Machine*, for instance, La Mettrie insists that 'there is no way to discover how motion is produced in matter'—it is inexplicable (La Mettrie, *Man a Machine and Man a Plant*, trans. Richard A. Watson and Maya Rybalka [Indianapolis/Cambridge: Hackett, 1994], p. 68). And yet, given the conception of nature worked out in *Man a Machine*, the only possible explanation for motion would be supernatural. Despite themselves, then,

self-proclaimed materialists—when they are also mechanists—prove to be implicit dualists.

11 It is perhaps helpful to note that Newton's equivocal thoughts about gravity gave credence to the eighteenth century mechanical theories that followed. Le Sage's mechanical philosophy is therefore not only representative of a distinctive yet ultimately insufficient solution to Newtonian dualism, but a systematic attempt to explicate the mechanist strand of Newton's own ambiguous philosophy of nature.

12 For Kant, 'the possibility of matter *requires* a force of attraction.' *KGS* IV: 508; *Metaphysical Foundations of Natural Science*, trans. James W. Ellington in *The Philosophy of Material Nature* (Indianapolis: Hackett Publishing Company, 1985), p. 56. Emphasis modified.

13 'Since [attractive force] first makes all matter possible as determinate occupation of space, and so also something palpable, it also contains the ground of contact itself. It must then precede contact, be independent of it' (*SW* I/3: 100; *First Outline*, p. 75).

14 *KGS* IV: 496; *Metaphysical Foundations*, p. 40.

15 *KGS* IV: 497; *Metaphysical Foundations*, p. 41.

16 *KGS* IV: 508; *Metaphysical Foundations*, p. 57.

17 *KGS* IV: 510; *Metaphysical Foundations*, p. 59.

18 Schelling rehearses Kant's argument in *SW* I/2: 231–232; *Ideas*, p. 185. See also Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 67–69.

19 Although Kant claims that 'the *essence* of matter' involves the fundamental forces of repulsion and attraction (*KGS* 511; *Metaphysical Foundations*, p. 60), this nevertheless refers to matter as that which could be given to *us* in experience; a non-human mind might intuit objects entirely differently than we do, according to Kant.

20 *SW* I/4: 75–78.

21 Beiser makes this point well in his discussion of Schelling's philosophy of nature. See *German Idealism*, p. 534.

22 *SW* I/2: 231; *Ideas*, p. 185. My emphasis. See also *SW* I/3: 303; *Introduction to the Outline*, p. 215.

23 Snow, *Schelling and the End of Idealism*, p. 75.

24 *SW* I/3: 265; *First Outline*, p. 190. See also the second edition of the *Ideas*: *SW* I/2: 241; *Ideas* p. 192. The relationship of influence goes in both directions. Baader's *The Pythagorean Square in Nature, or the Four World-Regions* begins by noting the impact of Schelling's *On the World-Soul* on Baader's philosophy of nature. Franz von Baader, *On the Pythagorean Square in Nature, or the Four World-Regions*, trans. Carlos Zorilla Piña in *Symphilosophie: International Journal of Philosophical Romanticism* 3 (2021), p. 237. See Eckart Förster, *The Twenty-Five Years of Philosophy: A Systematic Reconstruction,* trans. Brady Bowman (Cambridge, MA: Harvard University Press, 2012), pp. 241–242.

25 *SW* I/3: 313; *Introduction to the Outline*, p. 223.

26 That bodies can also be moved by other bodies through contact is not something that Schelling denies. He argues, instead, that bodies can be moved in this way only because they are already active in filling the determinate space

that they fill. See *SW* I/2: 206; *Ideas*, p. 165. Schelling does not go as far, then, as those early modern philosophers of nature who deny the communication of motion between bodies.

27 Baader, *The Pythagorean Square in Nature*, p. 243.
28 *SW* I/3: 264n; *First Outline*, p. 189n.
29 *SW* I/4: 147; *Presentation*, p. 165. Cf. Beiser, *German Idealism*, p. 537.
30 *SW* I/3: 312; *Introduction to the Outline*, p. 222.
31 *SW* I/3: 265–266; *First Outline*, p. 190.
32 For Schelling's attack on philosophies of nature premised on an irresolvable dualism, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, Chapters 1 and 3.
33 *SW* I/2: 165; *Ideas*, p. 128. Emphasis modified.
34 *SW* I/3: 127–128, 260; *First Outline*, pp. 94, 186.
35 *SW* I/3: 364n; *First Outline*, p. 189n.
36 As I have argued elsewhere with Whistler, this conception of potency is distinct from contemporary accounts of 'powers' in nature, which have their roots in Aristotelian metaphysics. Schelling is drawing upon a distinctively mathematical-philosophical tradition, and he has reasons to do so. See Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, Chapter 2.
37 *SW* I/4: 119; *Presentation*, p. 148.
38 *SW* I/4: 116; *Presentation*, p. 147.
39 *SW* I/4: 134–135; *Presentation*, pp. 157–158.
40 *SW* I/4: 147; *Presentation*, p. 165.
41 *SW* I/4: 144; *Presentation*, p. 163.
42 *SW* I/2: 359; *Treatise on the Relationship of the Real and the Ideal in Nature*, trans. Dale Snow in *International Philosophical Quarterly* 55. 2 (2015), p. 239.
43 *SW* I/2: 359; *Treatise on the Relationship*, p. 239.
44 As we will see in Part II of this book, Hegel has a different account of why Platonists conceive of matter as non-existent: the Platonist understands matter in this way because matter exists *as* a lack of rational being. See *W* 9: Remark to § 248, 28; *Philosophy of Nature*, p. 17 and *VPN* 1: 510; *VPN* 2: 965.
45 *SW* I/2: 359; *Treatise on the Relationship*, p. 239.
46 *SW* I/2: 223; *Ideas*, p. 179.
47 *SW* I/2: 359; *Treatise on the Relationship*, p. 239. Although it would be misleading to characterise him as a materialist, Schelling himself embraces the label as one of various possibilities for understanding the project of absolute idealism. Indeed, in the *Bruno*, he argues that the most accurate versions of materialism, intellectualism, realism, and idealism all say the same thing (*SW* I/4: 310–329; *Bruno, or, On the Natural and the Divine Principle of Things*, trans. Michael Vater [Albany: State University of New York Press, 1984], pp. 205–223). The materialist is 'right', then—i.e., the materialist is Schellingian—when she is right about what matter is and sees it as grounding the qualities and individuals that populate the universe. As Troxler's notes on Schelling's lectures during the summer semester 1801 have it, 'speculative materialism … conceives of matter as the ground of all activity.' *Schellings und Hegels erste absolute Metaphysik (1801–1802): Zusammenfassende Vorlesungsnachschriften von I.P.V. Troxler*, ed. Klaus Düsing (Köln: Jürgen Dinter, 1988). Schelling's

conception of material nature as ground is thematised more explicitly in 1809. See Chapter 3 below.

48 Note that, in Schelling's late work, the potencies are conceived of in a more Aristotelian vein, i.e., in terms of possibility that might or might not be realised. Thus, in his Berlin lectures, Schelling can make the following claim—entirely at odds with his earlier view: 'It is natural for those who believe to possess the exposition of the real chain of events in the pure science of reason, of the real generation of things, to be disinclined toward this word "potency". For this word "potency" reminds us that in the science of reason, or, what is the same thing, the pure a priori science, only the possibility of things, not the actuality, is comprehended.' *SW* II/3: 75; *Grounding of Positive Philosophy*, pp. 141–142, translation modified.

49 *SW* II/3: 58–59; *Grounding of Positive Philosophy*, p. 129. For an excellent account of the late Schelling's critique of reason and how it relates to his late discovery of Aristotle, see Marcela García, 'Schelling's Late Negative Philosophy: Crisis and Critique of Pure Reason', *Comparative and Continental Philosophy* 3.2 (2011), pp. 141–164.

50 During the second half of the twentieth century, this is, in part, due to the influential interpretations by Karl Jaspers and Walter Schulz, who link the late Schelling's assessment of the limits of reason to existentialist thought. See Karl Jaspers, *Schelling: Größe und Verhängnis* (Munich: Piper, 1955) and Walter Schulz, *Die Vollendung des Deutschen Idealismus in der Spätphilosophie Schellings* (Stuttgart: Kohlhammer, 1955).

51 This is the case even when philosophers seek to develop Schelling's late thought beyond its affirmation of a relatively orthodox Christianity. See, for example, Markus Gabriel, *Der Mensch im Mythos: Untersuchungen über Ontotheologie, Anthropologie, und Selbsbewußtseinsgeschichte in Schellings* Philosophie der Mythologie (Berlin: De Gruyter, 2006) and 'The Mythological Being of Reflection: An Essay on Hegel, Schelling, and the Contingency of Necessity' in Gabriel and Žižek, *Mythology, Madness, and Laughter: Subjectivity in German Idealism* (New York: Continuum, 2009).

52 S.J. McGrath, *The Philosophical Foundations of the Late Schelling: The Turn to the Positive* (Edinburgh: Edinburgh University Press, 2021), p. 47.

53 McGrath, *The Philosophical Foundations of the Late Schelling*, p. 48.

54 See McGrath, *The Philosophical Foundations of the Late Schelling*, pp. 49–63.

55 G. Anthony Bruno, 'The Facticity of Time: Conceiving Schelling's Idealism of Ages' in *Schelling's Philosophy: Freedom, Nature, and Systematicity*, ed. G. Anthony Bruno (Oxford: Oxford University Press, 2020), p. 188n. See also Bruno, '"From Time into Eternity": Schelling on Intellectual Intuition,' *Philosophy Compass* 18.4 (2023), p. 8.

56 See also Gabriel, 'The Mythological Being of Reflection', pp. 82–94 and Tritten, *The Contingency of Necessity*, pp. 167–198.

57 Heidegger, *The Principle of Reason*, trans. Reginald Lilly (Bloomington and Indianapolis: Indiana University Press, 1996), p. 21.

58 Heidegger, *Introduction to Metaphysics*, Second Edition, trans. Gregory Fried and Richard Polt (New Haven and London: Yale University Press, 2014), p. 7.

59 On the late Schelling's own conception of the willful decision required of one to turn from reason to a philosophy of existence—and on the difference between this decision and the leaps of faith suggested by thinkers such as Jacobi and Kierkegaard—see McGrath, *The Philosophical Foundations of the Late Schelling*, Chapter 3.

60 According to Heidegger, the distinction—essential to everything the late Schelling thinks—between negative and positive philosophy demonstrates the 'onto-theological' character of his metaphysics. Heidegger, *Seminare: Hegel – Schelling*, *Gesamtausgabe*, Vol. 86, ed. Peter Trawny (Frankfurt am Main: Vittorio Klostermann, 2011), p. 520. For defences of the late Schelling on this issue, see Ian Leask, 'Schelling and Onto-theology', *New Blackfriars* 81(952) 2000, 273–285 and Tyler Tritten, *Beyond Presence: The Late F.W.J. Schelling's Criticism of Metaphysics* (Boston and Berlin: De Gruyter, 2012).

61 Cf. Heidegger, *What is Metaphysics?*, trans. David Farrell Krell in *Basic Writings* (London: HarperCollins, 1993), pp. 93–110.

62 See also Hannah Arendt, *The Life of the Mind* (New York: Harcourt, 1978), Volume I: Thinking, pp. 145–147.

63 To be precise, Bruno does not claim that it is in Schelling's late thought that he is most attentive to this question; he brings out the importance of the question at key points in Schelling's development from the *Philosophical Letters* on, even if he sees the texts associated with the identity philosophy as dismissive of this question. Cf. Bruno, 'The Facticity of Time', pp. 187–191.

64 To Heideggerian readers, my attribution of dualism to Heidegger will no doubt appear ludicrous; but from the perspective of Schelling's Parmenideanism, Heidegger's insistence on the ontological difference—i.e., the difference between what *is* and what it means to be—is certainly a form of unwarranted dualism.

65 *SW* I/7: 174. It is unsurprising that the late Schelling sees his own earlier project as one that does not engage with the '"why" question': as an immanentist project, the early philosophy of nature rejects any account of *what is* that *transcends* what is. How could the late Schelling, committed to the transcendence of God and the importance of a form of explanation that goes beyond reason, be happy with such Spinozism?

66 *SW* I/7: 147; *Aphorisms as Introduction to the Philosophy of Nature*, p. 249.

67 Bruno, 'The Facticity of Time', p. 188n.

68 *SW* I/6: 193; *System* (First Part), p. 179. Cf. Emanuele Severino, who argues that even asking about why or whether being *is* is to lose sight of the meaning of being as *that which is*. Emanuele Severino, *The Essence of Nihilism* trans. Giacomo Donis (London and New York: Verso, 2016), p. 50. Severino's formulation of the matter is reminiscent of Schelling's claim that, 'by virtue of [the] affirmation [of knowledge] … we recognize the eternal impossibility of nonbeing … and that ultimate question … "Why is nothing not—why is there anything at all?" … will be swept aside forever by the necessity of being' (*SW* I/6: 155; *System* [First Part], p. 152. Translation modified). I take it, however, that Schelling's point here is that the question *has been sufficiently answered*. And so the question, I maintain, is one he takes seriously.

69 Whistler more than anyone has emphasised this latter point. See, for instance, Daniel Whistler, *Schelling's Theory of Symbolic Language*, pp. 178–179 and 'Schelling on Individuation', *Comparative and Continental Philosophy* 8.3 (2016), pp. 329–344.
70 *SW* I/6: 156; *System* (First Part), p. 153. Not all readers of Schelling see in this stage of his philosophical development a fully consistent commitment to sheer identity. Paul Ziche, for example, argues that, already in the system of 1804, we find a tension in Schelling's philosophy on this matter. In the philosophy of nature in particular, Ziche argues, Schelling relies upon the categories of nullity (*Nichtigkeit*), annihiliation (*Vernichtung*), and nothingness (*Nichts*). See Paul Ziche, 'Wirklichkeit und Nichtigkeit: Naturphilosophie in Schellings Würzburger System' in *Schelling in Würzburg*, ed. Christian Danz (Stuttgart-Bad Cannstatt: Fromann-Holzboog, 2017), pp. 79–101.
71 *SW* I/6: 175; *System* (First Part), p. 166. One consequence of acknowledging this feature of Schelling's philosophy of nature is that it becomes apparent just how important Schelling is in the philosophical lineage that runs from Spinoza to Deleuze. Cf. Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Continuum, 2004), p. 240 and *Expressionism in Philosophy: Spinoza*, trans. Martin Joughin (New York: Zone Books, 1990), pp. 18, 118. On the Schelling–Deleuze relationship, see Jason M. Wirth, *Schelling's Practice of the Wild: Time, Art, Imagination* (Albany: SUNY Press, 2015), Chapters 3 and 4.
72 *SW* I/4: 125; *Presentation*, p. 152.
73 *SW* I/4: 125; *Presentation*, p. 152.
74 *SW* I/5: 419; *Philosophy of Art*, p. 54. Schelling sees the nature-philosophical principle that nature abhors a vacuum to be a more specific version of this general metaphysical principle.
75 *SW* I/6: 174; *System* (First Part), p. 166. Emphasis modified.
76 *SW* I/6: 175; *System* (First Part), p. 166. Emphasis modified.
77 *SW* I/6: 174; *System* (First Part), p. 166. As Lovejoy argues, this is a central feature of the conception of the *scala naturae*: the principle of plentitude, which states that anything that *can* be *is*. Lovejoy, *The Great Chain of Being*, p. 52.
78 *SW* I/3: 284; *Introduction to the Outline*, p. 202.
79 *SW* I/6: 203; *System* (First Part), p. 186. Emphasis modified.
80 *SW* I/6: 199; *System* (First Part), p. 184. Emphasis modified.
81 Schelling is in this way far from who he will become in his late work. For in the late work, the existence of things that exhibit the potencies depends upon a contingent act of God. In this way, the potencies—for the late Schelling—are *potentialities*; they could have *not been realised*. For an account of how this view distinguishes the late Schelling from Hegel, see Dews, *The Late Schelling in Confrontation with Hegel*, pp. 126–138.
82 *SW* I/2: 226; *Ideas*, p. 181; *SW* I/4: 149; *Presentation*, p. 167.
83 For instance, Schelling argues that '*through* A = B, that is, *through* gravity … the ideal principle insofar as it is ideal is posited as $A^2$,' and thus, '$A^2$ subsists only insofar as A = B does.' *SW* I/4: 149–150; *Presentation*, p. 167.

84 '$A^2$' could also be represented as '$(A = B)^2$', which—when translated into the original identity—would be equivalent to '$(A = A)^2$'. Because the subject, 'A', and the object, 'A', in 'A = A' each on their own involve the whole of the subject-object identity of which they are a part (*SW* I/6: 165; *System* [First Part], p. 159), '$(A = A)^2$' can also be represented as '$A^2$'.
85 *SW* I/4: 4. The importance of these three categories for Schelling cannot be overstated, since various combinations of magnetism, electricity, and chemical process account for the existence of *all* qualitatively determinate products in inorganic nature.
86 One way to understand this new form of reality is that there is a kind of 'inwardness' here (*SW* I/4: 151; *Presentation*, p. 168), although we have yet to see something like the inwardness of *experience*.
87 *SW* I/4: 51.
88 *SW* I/4: 152–153; *Presentation*, p. 169.
89 *SW* I/4: 15.
90 *SW* I/4: 15.
91 *SW* I/3: 316, 317n; *Introduction to the Outline*, pp. 224–225, p. 226n.
92 As Friedman notes, many philosophers of nature, including Schelling, Ritter, and Ørsted, held the view that chemical combustion is explicable with reference to the relation between negative charge and oxygen, on the one hand, and positive charge and hydrogen, on the other. See Friedman, 'Kant—Naturphilosophie—Electromagnetism', p. 138.
93 *SW* I/3: 316; *Introduction to the Outline*, p. 225. See also *SW* 1/3: 318n; *Introduction to the Outline*, p. 226n.
94 *SW* I/3: 317; *Introduction to the Outline*, p. 225. In other words, although a body can conduct electricity and thereby be related to other conductors of electricity, the body *itself* is not related to those others *throughout its being* as is the case in chemical affinity.
95 *SW* I/3: 322n; *Introduction to the Outline*, p. 229n.
96 *SW* I/3: 322n; *Introduction to the Outline*, p. 229n. See also *SW* I/2: 165–166; *Ideas*, pp. 128–129, which makes it clear that, for Schelling, each and every body is not only potentially but actually magnetic.
97 A further principle that ties the categories of physics to the first potency is that the categories are identified with one-, two-, and three-dimensionality—the space that matter actively fills in the first potency. Magnetism is associated with one spatial dimension, i.e., length, proof of which can be seen in the line between the poles of the magnet (*SW* I/4: 15); electricity is associated with two-dimensionality, since electrically charged bodies are such throughout their surfaces (*SW* I/4: 18); and chemical processes are associated with three-dimensionality, since chemical substances are altered *throughout* (i.e., not just superficially) in the chemical process (*SW* I/4: 44–45). For an account of Schelling's derivation of three-dimensionality in both the early philosophy (1800–1804) and the later *Presentation of the Purely Rational Philosophy*, see Paul Ziche, 'Raumdimensionen und Prinzipiendeduktion: Beweise für die Dreidimensionaltität des Raumes bei Schelling und Hegel' in *Logik, Mathematik und Natur im objektiven Idealismus: Festschrift für Dieter Wandschneider zum 65. Geburtstag*, ed. Wolfgang Neuser and Vittorio Hösle (Würzburg: Königshausen & Neumann, 2004), pp. 157–173.

98 *SW* I/3: 24–25n; *First Outline*, p. 22n and *SW* I/4: 94–95; *On the True Concept*, pp. 55–56.
99 *SW* I/3: 101; *First Outline*, p. 76.
100 *SW* I/4: 95; *On the True Concept*, p. 56.
101 Cf. Caroline Angleraux, 'From Monads to Monera' in *On Metaphysics of Organisms and Human Individuals*, ed. Andrea Altobrando and Pierfrancesco Biasetti (Berlin: De Gruyter, 2020), pp. 153–176.
102 *SW* I/3: 23n; *First Outline*, p. 21n.
103 Cf. Berger and Whistler, *The Schelling–Eschenmayer Controversity, 1801*, Chapter 1.
104 *SW* I/4: 124; *Presentation*, p. 152.
105 *SW* I/6: 179; *System* (First Part), p. 169.
106 *SW* I/4: 182; *Presentation*, p. 186.
107 *SW* I/9: 443; *On Faraday's Most Recent Discovery*, p. 113.
108 *SW* I/4: 4.
109 As Schelling puts it in the *First Outline,* 'life is not a chemical process'. *SW* I/3: 174; *First Outline*, p. 126.
110 Snow, *Schelling and the End of Idealism*, pp. 84–85.
111 *SW* I/2: 349.
112 Snow, *Schelling and the End of Idealism*, p. 96.
113 Snow, *Schelling and the End of Idealism*, p. 90. Emphasis modified.
114 Snow, *Schelling and the End of Idealism*, pp. 114. Cf. Snow's interpretation of Schelling's editorial introduction to Steffens's *On the Oxidation and Deoxidation Process of the Earth*. Snow argues that Schelling ultimately hoped to reverse Steffens's procedure, so that instead of moving 'from the lowest to the highest processes', speculative geology would move 'from the highest to the lowest'. Dale Snow, 'Speculative Geology', *Kabiri* 2 (2020), p. 16.
115 Beiser, *German Idealism*, p. 549. My emphasis.
116 Beiser, *German Idealism*, p. 539.
117 Beiser, *German Idealism*, p. 549.
118 Beiser, *German Idealism*, p. 549. My emphasis.
119 While Beiser is very clear that Schelling rejects a certain form of vitalism (*German Idealism*, pp. 540–541, 544–545), he also interprets Schelling as some kind of 'vitalist' who sees 'everything [as] a part of the single universal organism' (*German Idealism*, p. 352). Cf. Anton Kabeshkin, "Schelling on Understanding Organisms", *British Journal for the History of Philosophy* 25.6 (2017), p. 1189n.
120 Beiser, *German Idealism*, p. 539.
121 Beiser, *German Idealism*, p. 538.
122 Beiser, 'Hegel and Naturphilosophie', *Studies in History and Philosophy of Science* 34 (2003), p. 141.
123 Grant, *Philosophies of Nature After Schelling*, p. 11. Note that neither Snow nor Beiser claim that the *organism* is the paradigm of physics. 'Life', 'living force', and 'organism' are all presumably different things. Nevertheless, Snow and Beiser are representative of a more general tendency in the reception of Schelling that conceives of life as the lens through which to interpret nature.

Another instance of this can be found in Matthews, *Schelling's Organic Form of Philosophy*, p. 8. Joan Steigerwald goes much further, it seems to me, in arguing against organicism, and yet she also ultimately understands the philosophy of nature as a philosophy of life. Joan Steigerwald, *Experimenting at the Boundaries of Life: Organic Vitality in Germany around 1800* (Pittsburgh: University of Pittsburgh Press, 2019), p. 293.

124 Grant, *Philosophies of Nature After Schelling*, p. 10.
125 Cf. Berger and Whistler, Chapter 4.
126 Grant, *Philosophies of Nature After Schelling*, p. 12. Grant cites *SW* I/7: 131.
127 Grant, *Philosophies of Nature After Schelling*, p. 12. *SW* I/4: 4.
128 *SW* I/4: 76–77.
129 *SW* I/7: 131.
130 Nor does he consider the different levels of reality to be attributes or modifications of a single substance, but, instead, as features of a self-determining process.
131 *KGS* V: 425; *Critique of the Power of Judgment*, trans. Paul Guyer and Eric Matthews (Cambridge: Cambridge University Press, 2000), p. 293. See also *KGS* V: 366–369; *Critique of the Power of Judgment*, pp. 239–241.
132 *KGS* V: 360–361, *Critique of the Power of Judgment*, p. 234.
133 *SW* I/3: 186; *First Outline*, p. 134.
134 *SW* I/2: 40; *Ideas*, p. 31.
135 *SW* I/3: 147; *First Outline*, p. 107.
136 *SW* I/3: 322, 325; *Introduction to the Outline*, pp. 229, 231.
137 *SW* I/2: 257; *Ideas*, p. 206.
138 *SW* I/3: 151–152; *First Outline*, pp. 110–111. See also *SW* I/3: 84n; *First Outline*, p. 63n: 'It is a completely false assumption that the sublimity of life-processes over the chemical can only be explained in terms of an immaterial force.'
139 *SW* I/6: 8; *Immanuel Kant: An Obituary*, p. 268. See Grant, *Philosophies of Nature After Schelling*, p. 29.
140 *SW* I/3: 325; *Introduction to the Outline*, p. 231.
141 *SW* I/2: 171–172; *Ideas*, p. 133.
142 *SW* I/3: 30; *First Outline*, p. 26.
143 *SW* I/4: 208; *Presentation*, p. 202.
144 *SW* I/2: 171–172; *Ideas*, pp. 133–134.
145 *SW* I/2: 6; *Ideas*, p. 5.
146 *SW* I/3: 145; *First Outline*, p. 106. It is not until the *Introduction to the Outline* and *General Deduction*, however, that Schelling becomes fully committed to the idea that the activities of the organism are potentiations of inorganic nature. Cf. Beiser, *German Idealism*, p. 548.
147 *SW* I/3: 61n; *First Outline*, p. 48n.
148 On the reception of Brown's theory of health in Germany, see John Neubauer, 'Dr. John Brown (1735–1788) and Early German Romanticism', *Journal of the History of Ideas* 28 (1967), pp. 367–382 and Nelly Tsouyopoulos, 'The Influence of John Brown's Ideas in Germany', *Medical History* 8 (1988), pp. 63–74.

149 Indeed, Brown's physiological theory is important for Schelling because it makes possible a *rationalist* theory of health. See Andreas Röschlaub, *Von dem Einflusse der Brown'schen Theorie in die praktische Heilkunde* (Würzburg: Kölischen Buchhandlung, 1798), § 259, p. 237.
150 'The system whose standpoint I have now just developed takes a stand between two opposed systems: the chemical system knows the organism merely as an object or product, and allows everything to act upon it as object upon object, i.e., chemically; the system of vital force knows the organism only as subject, as absolute activity, and allows everything to act upon it only as activity. The third system posits the organism as subject and object, activity and receptivity at once, and this reciprocal determination of receptivity and activity, grasped in one concept, is nothing other than what Brown called "excitability".' *SW* I/3: 90n; *First Outline*, p. 68n.
151 Tsouyopoulos, 'The Influence of John Brown's Ideas in Germany', p. 72.
152 John Brown, *The Elements of Medicine* (London: J. Johnson, 1795), pp. 143–144.
153 *SW* I/3: 146; *First Outline*, p. 107.
154 From this perspective, we see how life is quite different from the chemical process, which results in the dissolution of qualitative particularity. Rather than a chemical *product* of *another* process, the organism is a perpetual activity of *maintaining its own* individual character. As Schelling puts it, 'The organic distinguishes itself from the dead simply in that the existence of the first is not an actual *being* but rather a continual *being-reproduced* (through itself).' *SW* I/3: 146; *First Outline*, p. 107.
155 *SW* I/3: 145; *First Outline*, p. 106. Emphasis modified.
156 *SW* I/3: 145n; *First Outline*, p. 106n.
157 *SW* I/3: 206; *First Outline*, p. 148.
158 *SW* I/3: 218; *First Outline*, p. 157. See also *SW* I/4: 74. Translation modified.
159 Schelling's speculative biology can often appear, at first glance, to be exclusively concerned with animal life, since, according to Schelling, without sensibility 'no organism is possible'. Schelling argues, however, that plants are also sentient, even if they are so minimally sentient that we cannot perceive this in them. *SW* I/3: 156–157; *First Outline*, p. 114.
160 *SW* I/3: 157–158n; *First Outline*, pp. 115–116n.
161 *SW* I/3: 206; *First Outline*, p. 148.
162 *SW* I/3: 205–206; *First Outline*, p. 148.
163 *SW* I/3: 172; *First Outline*, p. 125. Emphasis modified.
164 *SW* I/3: 206; *First Outline*, p. 148. Emphasis modified.
165 *SW* I/3: 171; *First Outline*, p. 124. Emphasis modified.
166 *SW* I/3: 180–181; *First Outline*, p. 131.
167 *SW* I/3: 61n; *First Outline*, p. 48n. Emphasis modified.
168 *SW* I/4: 209; *Presentation*, p. 203.
169 *SW* I/3: 195n; *First Outline*, p. 141n.
170 *SW* I/3: 195n; *First Outline*, p. 141n.
171 *SW* I/3: 146; *First Outline*, p. 107.

172 In the *Timaeus*, Plato understands the world's body to require no perceptual faculties, no respiratory system, no nutritive system, and no limbs. And this is because there is nothing outside this body for it to perceive; no air external to it for breathing; no nourishment beyond it to consume and no waste for it to excrete; and no environment in which to move. It is entirely self-sufficient (33c-34a). Cornford notes that this conception of the world's body is part of Plato's Parmenidean inheritance (Francis M. Cornford, *Plato's Cosmology* [New York: The Libeal Arts Press, 1937] p. 55). Against the Pythagorean view that 'the world starts from a seed and grows like a living thing by taking in, as nourishment, more and more of the body that environs it', the Parmenidean insists upon the absolute self-sufficiency of nature (Cornford, *Plato's Cosmology*, p. 56).
173 See Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, p. 157.
174 The technical drive present in certain organisms differs, of course, and might be understood as a form of creativity in nature that anticipates the activity of the artist, the highest potency of spirit and an activity that closer approximates the creativity of *natura naturans*.
175 *SW* I/3: 59; *First Outline*, p. 46.
176 *SW* I/7: 271.
177 *SW* I/6: 398; *System* (Second Part), p. 100.
178 *SW* I/6: 398; *System* (Second Part), p. 100.
179 *SW* I/6: 398; *System* (Second Part), p. 101.
180 *SW* I/6: 399; *System* (Second Part), p. 101.
181 For more on this version of the organic series, see Berger, 'Great Chains of Being in Schelling's Würzburg System' in *The Concept of Nature in Classical German Philosophy*, ed. Luis Fellipe Garcia (Berlin: De Gruyter, forthcoming).
182 See J.G. Herder, *Outlines of a Philosophy of the History of Man*, Book III, Chapters 2–3, trans. T. Churchill (London: J. Johnson, 1800), pp. 48–58. and C.F. Kielmeyer, *On the Relations Between Organic Forces*, trans. Lydia Azadpour in *Kielmeyer and the Organic World: Texts and Interpretations*, ed. Lydia Azadpour and Daniel Whistler (London: Bloomsbury, 2020), pp. 29–49. On the broader story regarding the forces of life, in which Herder, Kielmeyer, and Schelling play a central role, see John H. Zammito, *The Gestation of German Biology: Philosophy and Physiology from Stahl to Schelling* (Chicago: University of Chicago Press, 2018).
183 *SW* I/3: 156–157; *First Outline*, p. 114. *SW* I/3: 493; *System of Transcendental Idealism*, pp. 123–124.
184 *SW* I/6: 398; *System* (Second Part), p. 100.
185 *SW* I/6: 398; *System* (Second Part), p. 101.
186 This is 'a creature which is not only unknown with respect to its boundaries but is also fully indeterminable'. *SW* I/6: 394; *System* (Second Part), p. 99.
187 *SW* I/6: 399; *System* (Second Part), p. 101.
188 *SW* I/6: 399; *System* (Second Part), p. 101.
189 *SW* I/6: 394–395; *System* (Second Part), pp. 99–100.

190 *SW* I/6: 394; *System* (Second Part), p. 99.

191 I do not mean to suggest that Schelling is thinking, in these passages, about the historical evolution of life out of infusoria; he is, however, hitting upon the philosophical importance of the historical generation of more sophisticated, determinate, and rationally advanced forms of life out of more basic, indeterminate forms. For a more detailed consideration of these issues, see Berger, 'Great Chains of Being in Schelling's Würzburg System'.

192 *SW* I/4: 77.

# 3 The Generation of Spirit

In 1809, Schelling published the *Philosophical Investigations into the Essence of Human Freedom*. In the preface to the *Freedom* essay, he claims that his philosophy of spirit will be presented in that text for the first time 'with complete determinateness'.[1] Although Schelling had published the *System of Transcendental Idealism* in 1800, that work does not fit in a straightforward way with the system Schelling developed between the years 1799 and 1809; the parallelism put forward in the *System* of 1800—in which neither the philosophy of nature nor transcendental idealism is given priority—is quickly abandoned in favour of the idea that the philosophy of nature must precede the philosophy of spirit.[2] As we will see, in the *Freedom* essay, Schelling continues to insist upon the systematic priority of the philosophy of nature, and he points to this priority as a reason it took him so long to present to the world his philosophy of spirit: in order to elucidate what the human being *is*, it is necessary to first work through the stages of nature that make human existence possible. My interpretation of the *Freedom* essay therefore follows that of others, such as Sebastian Schwenzfeuer and Charlotte Alderwick, who see the essay as the culmination of a line of thinking that began in Schelling's earlier texts on the philosophy of nature.[3] As Schelling himself puts it, the account of spirit presented in the essay 'could only be developed from the fundamental principles of a genuine philosophy of nature'.[4]

In this chapter, my main aims are to elucidate Schelling's conception of spirit as it is presented in the *Freedom* essay and to argue that it is in this essay that he comes to articulate his most compelling account of the nature-spirit relation. For it is in this text that the logic of Schelling's emergentism is made most explicit. Yet before turning to the *Freedom* essay, it will be helpful to consider Schelling's most detailed account, prior to 1809, of the emergence of humanity, which can be found in the posthumously published Würzburg lectures of 1804. Given the fact that these lectures were not published during his lifetime, it makes sense that

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Schelling understood the *Freedom* essay to be the first published exposition of his understanding of the human being. But the Würzburg lectures include the early Schelling's most systematically complete presentation of the philosophies of nature and spirit, and the *Freedom* essay builds in significant ways upon the thinking pursued during that earlier period. I will begin, then, by briefly outlining Schelling's 1804 account of the human organism, its capacity for thought, and its distinctive form of freedom, before moving on to interpret the *Freedom* essay.

## The Human Organism

In Chapter 2, we considered the rational development that Schelling understands to be at work in the series of life-forms that runs from plants to infusoria to animals. This series of life-forms does not terminate, however, in animal life. And yet nature does have an end: the human being. The human organism is therefore the final form in the series of living forms, according to Schelling.

What is immediately apparent from Schelling's reflections on the human organism is that he does not categorise it as a species of animal life. The human organism is a distinct life-form, one that ultimately signals the transition from the natural world to the world of spirit.[5] In fact, Schelling remarks that a proper philosophical account of the human organism 'would be a matter of a science of its own'—not an anthropology but an 'anthroposophy'.[6]

Although Schelling does not understand the human organism as an animal *per se*, he does not claim that the human is entirely *other* than animal life. Rather, the human form of life exhibits a *unity* of the plant and animal forms.[7] Schelling's point concerns the physiology of the human organism, but it goes beyond this and connects human physiology—specifically the erect posture of the human[8]—to the theoretical activity of the mind. Like animals, the human is 'torn from the earth',[9] achieving physical independence with respect to the terrain upon which it moves.[10] Yet like plants, the human stands upright, and this allows the human to direct its attention to that which is beyond the earth and the immediate concerns of worldly existence. Although we, like animals, are animated by natural drives for food and sex, there is something else that lights up for us as significant: the realm of ideas. In standing upright, the human organism does not only attend to that which is nearest to us, but to the whole of creation and its rational structure. And this is possible, because, in the human, we find the 'most perfect development of the brain':[11] 'The entire earth blossoms in the human brain, which is the most sublime flower of the entire process of organic metamorphosis.'[12]

The creature that has the capacity to *know*—and, as we will see in a moment, to act and to create—is distinct from all other forms of life. For this is a creature that lives in the 'ideal world'. The human organism does not exhibit a preponderance of any of the three activities that define the organic realm (formative drive, irritability, sensibility); on the contrary, with the logical emergence of the human form of life, we find the most complete expression of the absolute, or reason: an equilibrium of the organic activities and the physiological conditions for a fully realised rational existence. It is in this organism that reason—or subject-object identity—is maximally exhibited.

In 1804, Schelling conceives of the human organism as 'potency-less identity', signaling the fact that the series of nature's potencies will be recapitulated in the spiritual world on the basis of the sheer existence of the human (itself dependent upon nature's potencies for its existence). The first potency of humanity, or spirit, is knowing, and the three moments in knowing are self-consciousness, sensation, and intuition. Significantly, these three features of cognitive life are explained with reference to the universal categories of physics explored in Chapter 2 above: self-consciousness is, like magnetism, a process through which a single being exhibits difference or polarity within itself (in being aware of ourselves, *we* know *ourselves*);[13] sensation is, like electricity, a relation to that which is other, to the outside (we sense that which is *external* to us);[14] and intuition, like the chemical substance, relates to that which is beyond it as entirely intrinsic to its own being (we know that which is *outside* of us, but we know it *within the mind*, not as something external to us).[15]

It is worth taking a step back here to note that Schelling is not only seeking to explain the most general cognitive features of ordinary human life; he is also laying the groundwork for explaining how it is that *philosophical* thinking gets off the ground. To think philosophically—to trace, in thought, the rational development from inorganic nature to life and to the human spirit—is possible given the physiology of the human organism and its distinctively spiritual capacities. Indeed, it is because the human being *is human*, i.e., is spirit (and not mere nature), that this creature can *know* not only in an ordinary sense, but in the sense that Schelling himself claims to know: the human being can *abstract* from the standpoint of ordinary human knowledge;[16] descend the stages of nature; enter, intellectually, into the inner structure of reason *as such*; and subsequently ascend the potencies according to *nature's own* inner logic, presenting—in thought—the path that nature itself has taken from matter to human existence. In other words, Schelling's reformulation of Platonic recollection is given a nature-philosophical underpinning with an account of the human organism as the organism that *knows*, where knowledge, ultimately, involves the

intellectual retrieval of the most basic forms of reality. Such knowing is the form of thought in which reason realises itself most explicitly.

Although knowing is the first potency of spirit—just as theoretical philosophy is first in Schelling's system—knowing is not the only way that human beings exhibit rationality. The second potency of spirit is action, demonstrating that the human is not only oriented towards the true but also towards the good. Importantly, for Schelling, action is intimately connected to knowing; it is *one thing* that knows and acts.[17] This is one reason it is helpful to think of knowing and acting as potencies of one and the same being, namely, humanity.[18] But note that there is a direction to this series; the development from first to second potency is the development from knowledge to action, and not vice versa. Knowledge raised to a higher power is action. This means that knowing defines who we are in our most *basic* form. We are not, first and foremost, *practical* beings, but *thinking* beings. And yet, this also means that, in acting, we realise our rational character more fully. The practical is derivative, but it is—precisely because of its derivative status—higher than the theoretical.

According to Schelling, just as ordinary knowledge exhibits a lesser degree of rationality than philosophical knowledge does, so too are the actions of individual persons less free when they are out of sync with reason *as such*, i.e., reason understood as the absolute, subject-object identity, or being itself. In Chapter 1 we saw that, for Schelling, to think in a truly rational fashion means that one must abstract from the epistemic standpoint that distinguishes between subjectivity and objectivity and enter into the perspective of their essential identity. As we have seen, this does not mean that truly rational thinking begins from the identity of *nature and spirit*, but, rather, from the subject-object identity that first expresses itself *as a material world*. While thinking philosophically is a distinctively human capacity, it is not a capacity that is activated, strictly speaking, by consciousness; the stages of nature arise within reason *as such*, and the philosopher who has abstracted from her subjective viewpoint simply follows along. Something analogous takes place in human action. In truly free action, it is not that one makes a *choice* to act one way or another—although this is often what people imagine freedom to be.[19] Truly free actions are those actions that flow from the essence of reason itself, i.e., from subject-object identity, or the absolute, or God. When we turn to the *Freedom* essay—which, to be sure, differs from the *System* in important ways—we will consider what it might mean for an action to follow from, or be in alignment with, subject-object identity. What is important to note here is that, because free actions are those that issue directly from reason, human beings are not most free in acting *apart* from the order of things; on the contrary, human beings exhibit the most freedom when it is not even they themselves who are *acting*. From this perspective, 'Man is not

free for himself; only activity which stems from God is free, in the same way as only a similar kind of knowledge is true.'[20] For some interpreters of Schelling, this suggests that 'human freedom is an illusion and is therefore not worthy of serious philosophical treatment.'[21] But clearly Schelling thinks that there *is* something rightly understood as freedom, and it is something that we can see at work in human activity that flows from God (i.e., from the absolute or reason *as such*).

At this point in Schelling's intellectual development, the absolute is not understood to be free in the sense that it could act in various ways. As we saw in Chapter 2, Schelling's early philosophy of nature is actualist—everything that can be *is*—and necessitarianism is connected to this actualist commitment. There is no other way that things could be, according to Schelling, because everything that *is* issues from the necessary existence of absolute, or divine, or rational being. For this reason, truly free action—action that flows directly from the absolute itself—is 'nothing in separation from necessity'.[22] The idea that freedom is bound up with necessity will be central to the *Freedom* essay's account of human freedom, for this text continues to conceive of freedom as a form of necessity (and not, as in Schelling's late thought, as freedom *from* necessity). But, importantly, Schelling will argue in 1809 for a more nuanced conception of freedom, where even actions that issue from a *perversion* of reason can be understood as fully free. In 1804, however, Schelling—following Spinoza—understands actions that deviate from reason to be less free.

Because free acts are those that flow from reason with absolute necessity, the ethics put forward in the *System* resists the idea that an orientation towards the good obliges one to work towards a more perfect future. 'What is supposed to happen happens';[23] all that is within one's power, according to Schelling, is to align oneself with the necessity of reason. In so doing, one 'attempts to represent the highest in themselves'.[24] The good, on this view, is the joy achieved in living a fully rational life, and not, as someone like Fichte seems to think, the 'restless striving to improve [the lives of] others'.[25]

In both knowing and acting, then, reason is exhibited. And as with nature, this exhibition of reason is conceived of as both free and necessary. In the third stage or potency of spirit, 'free necessity appears in uniform manner as knowledge and as action.'[26] We find this unity of knowing and doing in art. And in art, the human being expresses reason, or subject-object identity, to the highest degree. It is no wonder, then, that at various points in his career, Schelling suggests that the greatest form of philosophy is permeated with poetry,[27] and that 'absolute truth and absolute beauty are one and the same'.[28]

Before we turn to the *Freedom* essay, it is important to repeat the point that, although knowledge, action, and art are distinctively *spiritual*

potencies—found exclusively in the human world—they all nevertheless depend upon the existence of the 'perfect, potencyless organism', demonstrated to exist, with necessity, in the philosophy of *nature*.[29] For this reason, Schelling insists that the development from the potencies of nature to the potencies of spirit involves no gap or break; the two series are continuous.[30]

This is a feature of Schelling's thought that I have sought to bring out in the previous two chapters, and I will attempt to do the same in interpreting the *Freedom* essay. Yet it would be disingenuous to suggest that, as far as the nature-spirit relation is concerned, an emergentist story is all that we find in the *System* of 1804 (or, for that matter, the earlier texts of the period). There is another side to Schelling's thought during the years 1801–1804—a side of his thought that can already been seen in 1797, when he identifies nature as visible spirit and spirit as invisible nature.[31] This is the Spinozist idea that nature and spirit are two aspects of the same being, and that there is not, in reality, any development from one to the other, because nature and spirit are, at bottom, the *same*. This line of thinking, while not necessarily inconsistent with a certain form of emergentism, can nevertheless obscure Schelling's commitment to the idea that spirit depends upon and, indeed, emerges from nature. As Lovejoy notes in *The Great Chain of Being*—and as Matt Ffychte has argued more recently—there is an apparent tension between the side of Schelling that emphasises the coincidence or simultaneity of the potencies and the side of Schelling that emphasises the development from one potency to another and, ultimately, from nature to spirit.[32] This latter idea requires that nature and spirit be understood as importantly different from one another, even if they are each manifestations of reason. As I have attempted to show, the emergentist thought is very much at work during the years of the so-called identity philosophy. The systematically first manifestation of the absolute, or subject-object identity, is nature. The potencies of spirit appear second within Schelling's *System* for a reason. Yet there is also no denying the fact that, given Schelling's relatively orthodox Spinozism during this period, we frequently find emphasised the idea that nature, spirit, and every one of their potencies are *fully* expressive of reason, suggesting that nothing is achieved in the development from one stage of reality to another, and that there is no dependence of one upon another. In 1809, Schelling makes it clear that spirit's dependence on nature is absolutely crucial, embracing in no uncertain terms the view that the human being *exists* because of nature, and that the world of spirit is not a mere reflection of the material world but a distinctive realm of reality. The key to this uncompromising affirmation of the logic of emergence, for Schelling, will be a deeper reflection upon the concept of identity.

**Spinozism and the Essay on Human Freedom**

Although it is early on in the *Freedom* essay that Schelling reconsiders the nature of identity, it will be helpful to begin with the more general context in which this reconsideration takes place. Broadly speaking, the essay aims to elucidate the ontological specificity of human freedom, and Schelling is at pains to deliver a conception of freedom that would be free from the traps of a certain form of Spinozism. For this reason, the essay is often seen as a turning point in Schelling's intellectual development, where he leaves behind the Spinozism of his earlier system of identity. According to this view, the *Freedom* essay marks a shift from the Spinozist themes of rational necessity and monism to the later Schellingian interest in freedom, contingency, and ontological difference. It is in this spirit that McGrath claims that 'the main argument' of the *Freedom* essay 'is not about rehabilitating Spinoza at all, or revamping *Naturphilosophie*';[33] instead, the essay 'inaugurates positive philosophy (even if it does not name it as such)',[34] positive philosophy being the later Schelling's empiricist project of understanding God's activity as free from the world and free from all necessity. Such an interpretation is of a piece with White's reading of Schelling as a proto-existentialist who struggled, throughout his life, to 'produce the antithesis to Spinoza's *Ethics*'.[35] According to White, the *Freedom* essay marks a breakthrough in that effort, since it demonstrates the incompleteness of the system of identity, which 'cannot extend to the human realm or even to the realm of organic nature';[36] the *Freedom* essay's focus on 'irrationality' and its suggestion that philosophy must become empirical means that 'the system of identity must … be abandoned' and the positive philosophy eventually put in its place.[37] Kosch likewise interprets the essay as 'mark[ing] the end of [Schelling's] adherence to the idealism of the early period' and its 'commitment to a very ambitious project of "constructing" nature and history and showing them to follow from an underlying rational principle and to be, at least in principle, rational and necessary'.[38]

This way of interpreting the *Freedom* essay is especially convincing when the starting point for interpretation is not the essay itself but the later Schelling's polemic against the one-sided character of rationalism. There is no doubt that, in his later philosophy in Munich and Berlin, Schelling abandons the monism of his earlier Spinozist period and seeks to supplement the rationalist, necessitarian philosophy of nature with a novel form of empiricism—an empiricism that attends to the existence of individuals in history by referring to their ultimate source in the creative act of a transcendent Lord of being. But none of this takes place in 1809. What does occur is that Schelling develops a far more unorthodox Spinozist metaphysics than he had up to that point. This is why, as Jason

Wirth notes, it is important to not overlook 'Schelling's many defences and developments of Spinoza', including the *Freedom* essay's 'spirited meditation on Spinoza'.[39] For it is only if we first acknowledge Schelling's continued affirmation of *some* form of Spinozism—broadly construed—that we can understand the manner in which Schelling distinguishes his own system from a more orthodox Spinozism.[40]

To begin, then, we can note that the *Freedom* essays seeks to defend Spinozism—and pantheism more generally—against the charge that it necessarily leads to the denial of God's existence and the reality of human freedom. Against such a charge—levelled most famously by Jacobi in his *Letters to Moses Mendelssohn on the Doctrine of Spinoza*—Schelling argues that, in fact, a properly understood pantheism is the only true form of theism and the only framework within which one can comprehend the ontological integrity of the autonomous individual. We can already see, then, that the *Freedom* essay does not take issue with Spinoza's monism; on the contrary, Schelling continues to embrace this monism for metaphysical and theological reasons to be explored in more detail below. Yet as Wirth argues, Schelling comes to see Spinoza himself as being constrained by a certain paradigm of thought, and Schelling seeks to free the spirit of Spinoza's pantheism from these constraints.[41] Indeed, it is this paradigm of thought that leads to the apparent fatalism of Spinoza's philosophy. Here, then, is how Schelling describes Spinoza's error:

> The error of his system is by no means due to the fact that he posits all *things in God*, but to the fact that they are *things*—to the abstract conception of the world and its creatures, indeed of eternal substance itself, which is also a thing for him. Thus his arguments against freedom are altogether deterministic... He treats the will, too, as a thing, and then proves, very naturally, that in every case of its operation it must be determined by some other thing, which in turn is determined by another, and so forth endlessly.[42]

Schelling is critical, then, of Spinoza's substance ontology, his assumption that to *be* is to be a *thing*. And, significantly, Schelling always held this critical perspective. The monism defended in his earlier work is not a *substance* monism; reason, the absolute, God—these are names for the essential being of all that exists, but they do not name some fundamental *substance* for Schelling. By contrast, in conceiving of God as a substantial thing—and in conceiving of the modes of God as things caused by *other* things—Spinoza, on Schelling's interpretation, denies the autonomous activity of both God and the human individual.

One way Schelling somewhat misleadingly characterises the problem with Spinoza's system is by describing it as 'one-sidedly realistic' and

inattentive to the 'ideal' world,[43] by which he means that it fails to account for the ontological specificity of spiritual existence (the 'ideal') and focuses exclusively on the structure of nature (the 'real'). This might suggest that, for Schelling, one could simply supplement Spinoza's philosophy of nature with a philosophy of spirit. But this is not, in fact, Schelling's view. Instead, he argues that the solution to Spinoza's error is to be found in reconceiving of nature along non-mechanistic lines—precisely in the manner that Schelling had been doing for years, beginning with the first edition of the *Ideas* in 1797. Despite moments of nature-philosophical insight that pierce through Spinoza's Cartesianism—for instance, in the letter to Tschirnhaus, in which Descartes's conception of extension is rejected on account of its interpretation of matter as inert[44]—Spinoza operates with a mechanistic understanding of the natural world. And this is something that Schelling had always criticised about Spinoza. Yet like many other idealist and romantic philosophers of the era, he was of the opinion that mechanism is not *essential* to Spinozism. Just as Herder develops a Spinozism in which organic forces are fundamental, Schelling's early philosophy of nature is Spinozist while conceiving of nature's activity along decidedly non-mechanistic lines.

In the *Freedom* essay, Schelling reflects back on this project of overcoming Spinoza's 'mechanistic view of nature'[45] from within a broadly Spinozist perspective. In doing so, he implies that there is a second reason Spinoza's philosophy of nature fails. In his own 'earliest writings', Schelling claims,

> Spinoza's fundamental concept … was given a vital basis through the more elevated way of regarding nature … From this there developed a philosophy of nature, which as a mere physics could indeed stand by itself, but which was always regarded, with respect to the whole of philosophy, as merely one of its parts (that is, its real part) and which would permit of being raised into a genuine system of reason only by first being completed by an ideal part wherein freedom is sovereign. In this freedom, it was declared, the final potentiating act was to be found through which the whole of nature found its transfiguration in feeling, in intelligence, and, ultimately, in will.[46]

As we can see, Spinoza's failure to grasp the dynamic character of the natural world does not only mean that he improperly understands the natural world; it also prevents him from developing an account of the development *from* nature to spirit. For Spinoza, there is no sense in which one attribute could possibly be understood as cause of another; moreover, there is no sense in which extension has explanatory priority over thought.[47] As we will see, the *Freedom* essay insists upon the ontological priority of nature

and the idea that nature is some kind of cause of, or explanation for, spiritual existence (namely, as its ground). Here, then, we find a second respect in which Schelling seeks to move beyond Spinoza. Significantly, however, this thought was also important to Schelling's vision from at least 1799 onwards. Indeed, as I have attempted to demonstrate, describing the atemporal development from nature to spirit is a constant, essential feature of Schelling's system prior to 1809 (even if it is sometimes obfuscated by his more orthodox Spinozist comments in the identity philosophy). This is why the discussion, in the *Freedom* essay, of the emergence of spirit from nature does not come as a surprise to the reader of Schelling; it is simply a more explicit account of an idea that had motivated so much of Schelling's thought up to that point. What is lacking in Spinoza's system—and what is not always fully explicit in Schelling's more orthodox Spinozist texts—is an account of the way nature grounds spiritual existence as a distinctive realm of what is.

From this perspective, Spinoza's philosophical vision is 'one-sidedly realistic' because his philosophy of nature does not clarify the way the sheer existence of inorganic nature explains the existence of increasingly subjective forms of nature and, ultimately, the existence of spirit or mind. According to Schelling, developing a more accurate account of what nature is—as Schelling himself had been doing since the late 1790s—should be enough to move beyond both Spinoza's mechanistic understanding of nature and his failure to conceive of material nature as an explanation of mind.

In the *Freedom* essay, Schelling takes issue with a third and final feature of Spinoza's thought, and that concerns Spinoza's failure to grasp the nature of human personality and moral evil. Schelling's view on this matter marks a significant departure not only from Spinoza but also from Schelling's own earlier, dynamic and emergentist Spinozism.[48] Although the earlier Schelling sought to surpass Spinoza by developing a non-mechanistic philosophy of nature and by accounting for the emergence of the spiritual potencies from the natural potencies, he did not articulate a critique of Spinoza's account of spirit *as such*. Here, then, we find a further meaning to the claim that Spinoza is 'one-sidedly realistic': his account of mind does not include attention to the moral personality and freedom of the human individual, a point that is especially apparent in Spinoza's proto-Nietzschean conception of badness as that which inhibits one's power.[49] On this issue, the Schelling of 1809 is at odds with his own earlier, more traditional Spinozism. In the *System* of 1804, evil is understood to exhibit a lesser degree of divine perfection than is exhibited by goodness. Indeed, Schelling even compares the difference between evil and goodness to the lower and higher forms of nature: just as there is a graduated series running from the stone to the plant, animal, and human being, with 'later'

stages in this series exhibiting a greater degree of reason, so too are evil and goodness arranged hierarchically, with evil actions exhibiting a lesser degree of reason than good actions.[50] As we will see below, the *Freedom* essay presents a very different conception of evil, refusing all analogies with less-than-human forms of nature.[51] No longer identifying evil as less rational and less free than goodness, the Schelling of 1809 clearly distinguishes his understanding of human freedom from Spinozism.

That being said, Schelling continues in the *Freedom* essay to promote a *rationalist*, *necessitarian*, and *monist* metaphysics. In this way, he remains committed to a view we might still identify as a form of Spinozism. Indeed, the logic of emergence that is made most explicit in this text—and through which the possibility of evil is explained—is only intelligible once we grant that, according to Schelling: (i) we have epistemic access to the rational structure of nature, in which everything that *is* can, in principle, be understood from the perspective of reason; (ii) none of the stages of nature emerge by chance but always for a reason; and (iii) every stage of nature and spirit is an expression of reason (or God)—indeed, nothing exists but various expressions of reason (or God). The rationalist, necessitarian, and monist metaphysics of the earlier philosophy of nature, then, remains in full force in the *Freedom* essay. In 1809, Schelling simply makes more explicit than he had previously why it is that the expression of reason as spirit—i.e., human existence—is dependent upon nature, the more original expression of reason. In theological terms, this means that God must necessarily express himself first and foremost not as a personal, spiritual existence but as nature, or what Schelling will describe as the impersonal ground of God's spiritual existence. The Schelling of the *Freedom* essay is not, then, the late Schelling, who conceives of nature and spirit as creations of a transcendent God that could have acted otherwise in his creative activity. The existence of individual human persons is explained, in the *Freedom* essay, with reference to nature alone, i.e., God's necessary activity as impersonal, non-conscious ground of spirit.

## Identity Reconsidered

The perspective we find in the *Freedom* essay is therefore not, it seems to me, antithetical to all forms of Spinozism. It does, however, move beyond Spinoza himself in fundamental ways. And it does so by beginning with the tenet of Spinoza's thought with which Schelling sympathises most: the immanence of things in God, or, put otherwise, the pantheistic identity of God, nature, and humanity. This is the starting point of the essay on *Freedom*: a reevaluation of the concept of identity that is implicitly at work within pantheism. If the pantheist claims that God is 'identical' with everything that *is*, then the entirety of this metaphysics hinges upon how the

pantheist interprets the concept of identity.[52] And according to Schelling, there has been a 'general misunderstanding of the law of identity or of the meaning of the copula in judgement'.[53] Such a misunderstanding, Schelling tells us, leads to the failure to comprehend the ontological specificity of human freedom and its source in nature. For within a confused pantheistic system, the identity of God, nature, and humanity is misconstrued as their *sameness*.[54]

Opposed to the interpretation of identity as sameness, Schelling writes, the law of identity must be understood to be 'of an intrinsically *creative* kind'.[55] The *creativity* of the law of identity is disclosed in 'the profound logic of the ancients' which 'distinguished subject and predicate as what precedes and what follows (*antecedens et consequens*) and thus expressed the real meaning of the law of identity.'[56] In statements of identity, subject and predicate are identical, but they are not the same. This is the case for all predication, in ordinary judgements (symbolised as A = B), such as 'this body is blue,' as well as more basic, tautologous statements of identity (symbolised as A = A), such as 'the body is body'.[57] In A = B and A = A alike, the predicate expresses something *different* than is expressed in the subject. To take Schelling's example of tautology, in the statement 'the body is body,' the predicate 'body' explicates something *distinct* from 'body' understood as simple *subject*, and the statement as a whole thereby expresses the literal *explication* or *unfolding* of a content (A = A) that does not appear explicitly in the mere subject of the proposition (A); in this case, the actual, individual body is *a* body, i.e., the thing is an instance of a general kind.

For Schelling, then, 'identity' is this process of explication, which discloses a difference between subject and predicate. Such an explication or unfolding is rightly understood as *identity*, because it reveals the intrinsic unity of the antecedent and consequent—i.e., the fact that the consequent is the consequent it is with reference to the antecedent from which it is explicated. In other words, the consequent *only is as consequent* insofar as it is explicated from the grammatical subject. And yet this unity only becomes apparent—indeed, it is only realised—insofar as the consequent is in fact explicated as predicate, i.e., as distinct from the subject—hence Schelling's claim that identity is 'creative'. Central to Schelling's idea here is that the predicate is wholly dependent upon the subject from which the predicate is unfolded, for without the subject (antecedent) there could be no predicate (consequent). And it is by emphasising this relation of dependence in predication that Schelling can interpret the law of identity as a process of differentiation.

The distinction between antecedent and consequent in predication brings Schelling to the pair of concepts for which the *Freedom* essay is best known: ground and existence. Significantly, Schelling notes that his

own philosophy of nature 'first established [this] distinction … between being [*Wesen*] insofar as it *exists*, and being [*Wesen*] insofar as it is the mere *ground* of existence'.[58] § 35 of the 1801 *Presentation* reads: '*Nothing individual has the ground of its existence in itself*—For otherwise its being would necessarily follow from its essence.'[59] The idea here is that *anything that exists* must be explained in terms of a ground from which it differs in some sense. The only exception to this rule is reason or being as such, which has its ground within itself.[60] According to Schelling himself, then, the logic of identity articulated in the *Freedom* essay is not entirely novel; we find here a more explicit consideration of the creative nature of identity, which is at work in a subtler and often implicit manner in the earlier philosophy of nature.[61]

An illustrative case is the account of the relationship between the inorganic and organic discussed in Chapter 2 above. After writing, in the *Introduction to the Outline*, that 'the universal problem of speculative physics … [is] to reduce the construction of organic and inorganic products to a common expression', Schelling argues that it is in fact impossible to do so, because the organic is 'only the higher power' of the inorganic.[62] Implicit in this thought is the idea that the true identity of the inorganic and organic is grasped only if we understand the former to be the ground of the latter's existence. Rather than having their identity in some third thing, the inorganic and organic are 'identical' insofar as the organic is explicated from an inorganic ground as its higher potency. Such explication of the higher from the lower *is* their identity. That, anyway, is what the early philosophy of nature suggested. We can therefore see that Schelling's conception of the relationship between ground and existence does not only have its explicit origin in the early philosophy of nature—i.e., in the *Presentation*'s remarks about ground and existence *as such*—but that the entire conception of nature as a system of potencies involves an implicit conception of the ground-existence relationship. Indeed, as Schwenzfeuer remarks, the *Freedom* essay's account of the ground-existence relationship is a 'reformulation of the doctrine of the potencies.'[63]

There is a further and highly significant connection between the philosophy of nature and the conceptual pair 'ground/existence'. To see this, we must first note that this pair of concepts applies to all beings. One can distinguish between the ground and the existence of everything that is: inanimate objects, animals, humans, and so on. For anything that exists, the philosopher should, in principle, be able to point out the difference between it and the ground of its existence. But in the broadest sense, Schelling is discussing the ground and existence of *God*. The *Freedom* essay is, after all, an essay on pantheism. And here the identity at the heart of pantheism correctly understood proves unusual: the ground of

God's existence, although not external to God as a whole, is somehow other than his existence. And, according to Schelling, the ground of God's existence—the ground that is *in* God but is not, properly speaking, divine personality—is nothing other than *nature*.[64]

Nature is the ground of God's existence, and, as ground, nature is 'not to be called God' even though it is, properly speaking, contained within God (i.e., God understood as the broader unity of his ground and his existence).[65] I will consider this 'broader unity' in detail below. At this stage, it is important to clarify the ontological character of the natural ground of the divine life and how this ground relates to spirit more generally. First, we can note that when Schelling describes ground as nature he does not have in mind nature insofar as it exists in determinate natural products. Instead, Schelling identifies ground with nature's essential productivity, the productivity responsible for the emergence of all individual beings (all of which are in God). In other words, the ground of spiritual existence is what Schelling had described in the *Introduction to the Outline* as nature conceived of as *subject*. Given Schelling's identification of ground with nature as impersonal subject, we can take the pantheistic statement, 'nature is spirit' as the central albeit implicit thesis of the *Freedom* essay. As we have seen, Schelling's interest in the principle of identity is not a merely formal interest in the logic of judgement. On the contrary, the relationship between grammatical subject and predicate in judgement reveals an *ontological* relationship between ground and existence. Therefore, when Schelling designates 'ground' as 'nature', we should read this back into his logic of identity, where ground corresponds to the subject of any given judgement. Nature, therefore, proves to be the quintessential subject in predication. And although Schelling does not explicitly say so, it follows that the statement 'nature is spirit' is the statement of identity *par excellence*, since it expresses the pantheistic maxim by positing nature as the *ground* of all spiritual *existence* (human and divine).

The implications of Schelling's logic of identity for his conception of the nature-spirit relation now become clear. Because statements of identity do not express sameness between subject and predicate, the pantheistic statement 'nature is spirit' does not claim that spirit can be *reduced* to nature (or vice versa). On the contrary, the true statement of nature-spirit identity gives expression to the idea that spirit unfolds *from* nature as *distinct* from it. 'Nature is spirit' must therefore be read as a statement of nature's *self-differentiation*, or as the *unfolding* of spirit *from* nature. Just as 'this body is blue' describes the manner in which 'blueness' unfolds as distinct from 'this body', 'nature is spirit' expresses the genuine standpoint of pantheism, that nature *is* spirit insofar as nature explicates itself as the spiritual existence which it itself is not *as nature*. But the order of dependence is utterly crucial here: spirit *is* only insofar as it is consequent

upon nature as its *non-spiritual ground*; natural forms—inorganic and organic—depend in no sense upon *spirit* for their existence.

This also clarifies what Schelling means when he states, in the *Freedom* essay, that the concept of *immanence* should be replaced with 'the concept of *becoming* … the only [concept] adequate to the nature of things'.[66] The 'thing' with which Schelling is most concerned in the *Freedom* essay is, of course, human freedom, and thus, surpassing the limits of orthodox Spinozism involves providing a genetic account of human freedom (and, more broadly, the existence of personality). Yet Schelling's problem is not with the concept of immanence *as such*, but immanence only 'insofar as it is meant to express a dead conceptual inclusion of things in God',[67] i.e., immanence that *lacks* the development within God—or the absolute—the development progressing from nature to spirit. To be sure, in the *Freedom* essay, Schelling does not go so far as to understand this *becoming* of human freedom in *temporal* terms. Schelling is explicit here, as in his early philosophy of nature, that spiritual existence is not *temporally* consequent upon a natural ground, but rather that the relation between antecedent and consequent in predication discloses a relation of ontological dependence.[68] Nonetheless, the language Schelling uses throughout the *Freedom* essay—and throughout his thought more generally—indicates an implicit concern for historical creation and development. As we will see in Chapter 8 below, Schelling finally comes to embrace a historical conception of the relationship between nature and spirit in the drafts of *Ages of the World*. Prior to that period, however, any notion of natural-historical development remains merely hinted at in Schelling's thought.

The ramifications of Schelling's logic of identity for philosophical practice and the organisation of philosophical science prove significant. Indeed, if nature is the ground of spiritual existence, then the task of philosophy *as such*—to present, systematically, the rational structure of beings as a whole—becomes directed to *nature* as the fundamental site of ontological investigation; the philosophy of nature must precede any account of spiritual freedom. The logic of identity presented in the *Freedom* essay therefore reaffirms the view we have seen Schelling promote from the *General Deduction* onwards, namely, that the philosophy of nature must be pursued up until it derives the necessary existence of consciousness, and only on that basis can a philosophy of spirit get off the ground.[69]

From this position, we can better understand Schelling's criticism of modern philosophy for what he takes to be its unwarranted and narrow focus on spiritual subjectivity, i.e., its anthropocentrism.[70] His reason for taking issue with the anthropocentrism of modern philosophy is twofold: On the one hand, to turn away from nature as something that philosophy can tell us about—or even to develop a philosophy of nature, such as Fichte's, that begins from the practical concerns of the creature[71]—is

simply to give up on the very project of philosophical thinking, the scope of which surely includes knowledge of the non-human and non-living world, a world without interests, a world that simply *is*. On the other hand, to treat the spiritual or the human in isolation from nature is to fail to account for why there is such a form of existence in the first place. As Schelling puts it in an incomplete text on the transition from nature to spirit:

> Because [metaphysics] wanted to spiritualize itself completely, it first of all threw away the material that was absolutely necessary to the process and right from the very beginning it kept only what was spiritual.[72]
>
> A person earns, so to speak, the right to the most spiritual objects only when he has already taken care to understand their opposite.'[73]

Thus, against the anthropocentric metaphysics of modernity, Schelling is concerned, first of all, to develop a philosophy of nature for its own sake. But a second problem with this tradition is that it fails to provide us with a satisfactory account of why there is human subjectivity at all, and the *Freedom* essay seeks to succeed where previous philosophers have failed. Schelling's criticism of anthropocentric metaphysics is therefore not aimed at denying the reality or the value of human subjectivity, but at providing an explanation for it that can only be developed from the perspective of a philosophy of nature.[74] It seems to me that, in this regard, Schelling presents an even more formidable challenge to twentieth and twenty-first century philosophy than he does to post-Cartesian metaphysics.

While not the focus of the present study, the theological dimension of this point should not be overlooked: it is only with the emergence of humanity that the spiritual, *including the spiritual person of God*, comes to be. Nature *must be* if God is to exist, not because nature is *itself* God, but because nature is the ground of divine existence. The divine life can only emerge on the basis of natural processes. And not only this. The existence of God depends upon nature *and* those creatures which realise the transition from nature to spirit: human beings. Indeed, divine existence is only realised, ultimately, through the *human* spirit.[75] Or, as White puts it, 'God becomes manifest in and through mankind as a whole.'[76] The Schellingian story of creation, then, is one that leads from nature, through humanity, to God—the whole *process* of which can be understood as divine.

### Indifference and Difference

Up to this point, we have seen that the conceptual pair ground/existence allows Schelling to (i) articulate a logic whereby spiritual existence can be understood to emerge from a natural ground; and (ii) affirm an

organisation of philosophical science that reflects the ontological priority of nature. Below, I will consider how this same conceptual pair is integral to Schelling's understanding of the ontological specificity of spiritual life. But first, it is important to consider in further detail the conception of identity at work in Schelling's discussion of ground and existence. Ground and existence, for Schelling, are 'identical' insofar as existence is consequent upon the ground of existence. Ground and existence are not, therefore, the 'same' but are nonetheless 'one' in the following sense: that which exists does so *because* it has a ground, and the ground of existence is the ground it is *because* that which exists on its basis exists. Neither ground nor existence can be what they are without the latter being explicated from the former. This is symbolised, formally, as A = B. What requires further consideration is the nature of the copula that unites A and B, ground and consequent.

Although Schelling discusses the logic of predication early on in the *Freedom* essay, he curiously does not consider the ontological status of the copula itself until the essay's final pages, where he identifies the copula as 'indifference'. But despite its late appearance, this concept of 'indifference' is implicitly at work throughout the whole of Schelling's *Freedom* essay and the works that precede it. Indeed, as we come to learn, 'indifference' is 'the only possible concept of the *Absolute*'.[77] Schelling thus continues to hold the view, promoted in his system of identity, that the absolute is nothing other than identity itself conceived of as indifference, and that 'to know this [indifference] is to uncover the original metal of truth, as it were, the prime ingredient in the alloys of all individual truths, without which none of them would be true'.[78] Yet in the *Freedom* essay, Schelling significantly revises his conception of indifference—or, if we are to be more charitable to Schelling's claims about not having abandoned his earlier ideas: he renders explicit, in 1809, what was only implicit in the texts of 1801–1804.[79]

We have already seen that, in the *Freedom* essay, the copula in judgement does not signify the *sameness* between subject and predicate, but a relationship between antecedent and consequent. Identity or indifference, then, must be of an entirely different nature than something that merely links two things that logically precede their union. Indeed, because identity involves the unfolding of one thing from another, it is erroneous to think of identity as something that binds together two pre-existing things. Turning again to the nature of judgement as a guide to thinking about the nature of identity, the copula can be seen as somehow immanent to the subject and predicate of a judgement. We learn from this that identity is not a third thing set apart from ground and existence, but the process through which ground grounds that which exists. In other words, identity is the becoming of beings and their grounds.[80]

Why, then, does Schelling conceive of identity as 'indifference'? Because the becoming or unfolding of one thing from another cannot itself be either the one or the other. For instance, the unfolding of spirit from nature cannot, technically, be either natural or spiritual; for such unfolding to occur, it must be ontologically neutral or indifferent with respect to the nature-spirit binary. Without such ontological neutrality or indifference—indeed, without such ontological *indeterminacy*—there would be no antecedent or consequent, no ground or existence.[81] The generation of spiritual existence out of its natural ground must itself be 'indifferent' in this technical sense.

Here is a further point about indifference. We already know that, for Schelling, there is no ground that doesn't ground the existence of something and no existing thing that isn't grounded. In other words, for ground and existence to be the ground and existence they are, there must be indifference, i.e., there must be a bond between the two, which is the unfolding of the second from the first. Since indifference is required for ground and existence to be ground and existence, it can be understood as 'the source from which everything flows',[82] a 'bond' (*Band*) that logically precedes the 'bonded' (*Verbundene*).[83] In addition to the apparent indeterminacy of identity, then, we see that it also seems to involve ontological precedence in relationship to that which is determinate, namely, everything in nature and the human world.

One of the great critics of the Schellingian conception of identity, or the absolute, as 'indifference' is Hegel. Briefly considering Hegel's criticism will put us in a position to draw out the specificity of Schelling's conception of identity.

As I have just put things, it looks as though absolute identity both precedes all determinacy and is supposed to account for determinacy in the world. In the Preface to the *Phenomenology*, Hegel famously criticises this conception of the absolute as 'the night in which all cows are black'.[84] His point is that, if one operates with a conception of identity as indifferent, it is impossible to look to that identity for an account of determinate difference. Indeed, for Hegel, Schellingian 'indifference' appears to be *other than* difference and is therefore an 'abstract' form of identity, an indeterminate identity that is only ever corrupted by difference; true identity, by contrast, will not be *other than* difference but will necessarily involve difference as a moment of its truth *as identity*.

Hegel is right to note a difference between how he and Schelling conceive of identity. But he is wrong to understand their difference as one between an idealism that *embraces* determinate difference and one that *rejects* it in favour of an indeterminate and undifferentiated absolute that would be corrupted by difference. Schelling's absolute is not one that is *opposed* to difference in this way, as if 'indifference' to difference held

within it a secret antithetical relationship to difference. On the contrary, such an *opposition* to difference could only belong to a 'relative identity', which, for Schelling, would certainly be caught up in a dialectic of identity and difference on account of its intrinsic *difference from* difference. *Absolute* identity, by contrast, is *indifferent*, precisely because it is *not* opposed to difference, nor is it opposed to any other category for that matter; it is utterly non-oppositional and thus cannot be in any way antithetical to difference.

But that is not at all. We have also seen that identity *is nothing other than* explication or unfolding—it *is* the relationship between ground and existence and nothing more than this. Consequently, absolute identity or indifference is correctly understood as the coming-to-be of all that is determinate. The Schellingian absolute is not some absolute being in which all determinacy is subdued or lost; it is rather the process through which determinacy arises. This is why Manfred Buhr can claim that, for Schelling, 'the essence of the absolute is pure identity, pure productivity'—identity and productivity being the *same thing*.[85] In Grant's words, 'identity differentiates rather than integrates.'[86] The kind of identity here is the same as that which is expressed in the identity claims made throughout the Gospel of John—'I am the bread of life', 'I am the light of the world', etc.—in which the copula signifies Christ's self-differentiation as 'the bread of life', 'the light', 'the door', 'the true vine'.[87] It is true that, for Schelling, it is because there is identity that there is determinate difference—this is what it means to say that indifference is the 'source' of determinacy. But specifying the kind of source is crucial to understanding Schelling's view. As the *Freedom* essay makes clear, identity is a 'source' only in the sense that it *is* the process of differentiation, the process without which nothing would be what it is.

Near the end of the *Freedom* essay, Schelling claims that, while identity is the 'originary ground' (*Urgrund*) of ground and existence, it is not, properly speaking, a ground but a non-ground (*Ungrund*).[88] Ground, after all, is *separate* from that which it grounds; the absolute, by contrast, does not involve such separation. The bond is nothing without the bonded, '=' nothing without 'A' and 'B', indifference nothing without the differentiated. That is, identity—or the absolute—does not lie outside the activity by which existence is grounded. It has no being of its own, apart from the differentiated worlds of nature and spirit that are realised in the process that identity *is*. Indifference, then, does not lie behind or beneath what appears; it *is* the appearing, or the becoming, of what is.

This is a point that, I take it, White misses in the following, quasi-Hegelian comment:

> Since … it is fully undifferentiated and therefore cannot serve as the starting point for any explanation of the world process, the Urgrund

> is the *Ungrund*, the nonground. Schelling does not concentrate on the Ungrund itself; he asserts that it is the absolute and then, characteristically, he begins to attempt to derive content from it.[89]

It seems to me that we will always interpret Schelling in this Hegelian manner if we begin with the idea that there is some *thing* called indifference, *Urgrund*, or *Ungrund* and then subsequently seek to derive the determinacy of the natural and spiritual worlds from this first *thing*. Schelling's idea—which does not become explicit until the *Freedom* essay and is admittedly, even there, somewhat underdeveloped—is that indifference *just is* the process through which existence is grounded, with ground and existence playing distinct roles that are *united* precisely in this process. This is central to Schelling's anti-foundationalism: the principle of identity is at work in everything *that is*, but it is not a foundation or ground upon which 'other' things depend. All beings owe their existence to identity or indifference in the sense that identity is the process through which things come to be. With the *Freedom* essay's logic of identity, then, Schelling comes to understand the absolute, or reason, as creativity itself[90] (without, however, tying such creativity to novelty or unpredictability, as we find in someone like Bergson).

Were the Hegelian to take on board this more immanentist account of Schellingian indifference, she might still have concerns. Two key concerns can be drawn from what we have now covered. First, although this account of Schelling seems to close the gap between 'identity' and 'determinacy', a minimal gap remains, and this is a problem from a Hegelian perspective. Second, although Schelling might understand identity to be a process of differentiation, he is without the resources to explain this process, since there is no element within his conception of identity that could motivate the kind of self-negating activity required for differentiation. Let us consider each of these criticisms in some detail.

### *I 'Essentialism'*

One reason the Hegelian will reject the Schellingian logic of indifference is because it appears to be an 'essentialist' logic. To understand this claim requires some knowledge of Hegel's *Science of Logic*, and in Chapter 4 below I describe Hegel's conception of 'essentialist' thought in more detail. Suffice it to say that, from the perspective of Hegelian logic, the relation between ground and existence central to Schelling's essay is an *essentialist* relation, since it involves two *different* categories that are intrinsically related to one another. We have already seen this idea in Schelling himself, since ground *is the ground it is* only insofar as it grounds existence and existence is what *it* is only insofar as it is grounded. Hegel is well aware

of the fact that a great number of philosophers are drawn to such 'essentialist' modes of explanation. But he thinks we should be cautious when we encounter this type of reasoning, because it is not, ultimately, as rational as it may appear. The most rational form of knowing, for Hegel, will not be focused on concepts that are essentially related to one another, but will be focused instead on the *self*-differentiation of a *single* concept. Indeed, this is why, in the *Logic*, the Doctrine of the Concept follows the Doctrine of Essence: genuinely rational development—which is the most truthful expression of the development of being itself—is *self*-development, not the processes through which various terms are intrinsically related to one another (e.g., positing and that which is posited; grounding and that which is grounded; production and that which is produced). So right from the start, the *Freedom* essay looks suspect to Hegelian eyes. And Schelling appears to make things worse for himself—digging his heels into an essentialist form of reasoning—when he refers to indifference as the *originary* ground (*Urgrund*) of ground and existence. Everything looks here as though Schelling's attempts at rational explanation are of the impoverished form so typical of modern philosophy, where things are explained by referring to things that differ from them, yet in an irreducibly or essentially related manner. At least on the surface, then, Schelling doesn't seem to move beyond this form of explanation, and thus he fails to achieve what Hegel takes to be the truly rational standpoint, in which explanation proceeds by way of the entirely immanent unfolding of a single concept.

That Schelling ultimately understands indifference as an *Ungrund* might suggest that he, too, is seeking to close the gap between ground and existence and is, in this way, committed to something like the immanence of Hegelian self-development. After all, we have seen that the *Ungrund* is nothing other than the *becoming* of ground and existence. To my knowledge, Hegel never commented on Schelling's conception of indifference as an *Ungrund*, but it is difficult to imagine that Hegel would have been satisfied with Schelling's reformulation of absolute identity in this manner.[91] Although the originary ground is nothing other than the coming-to-presence of what is, the Hegelian will argue that there remains a sense in which this coming-to-presence is distinct from what is, and this indicates that Schelling continues to be caught up in an essentialist logic. Indeed, from this Hegelian perspective, Schelling's tendency—from the very beginning of his philosophical development—to describe the absolute in terms of *production* (*Erzeugung*) and *creation* (*Schöpfung*) speaks to the fact that he understands there to be an ontological gap between that which is generated, on the one hand, and the processes of generation, on the other.

In support of this Hegelian view, one could note that, beginning in the 1820s, Schelling did emphasise the ontological gap between production and product as he turned to a conception of God as transcendent creator.

There are, additionally, many moments in Schelling's earlier work that refer to such a gap or difference. The *First Outline*, with its claims about productivity exceeding its products, is exemplary in this regard.[92] If one is convinced by Hegel *and Schelling* that a truly rational form of philosophy will attempt to derive the *ahistorical* sequence of nature's stages, then it seems that one must side with Hegel in seeing Schelling's own system as compromised by his 'essentialist' concerns with creation, origination, and generation. For these concerns do suggest that, at the end of the day, Schelling is not only interested in describing the immanent development that runs through the inner logic of nature, but that he is also interested in explaining something that *happens* in nature—for instance, actual events in which certain forms of life emerge. Schelling's conception of identity as creative, then, might be intimately connected to his flirtations with understanding nature's historical development as philosophically significant. And if Hegel is right that such natural occurrences lack philosophical significance, Hegelian logic might help put us on the right path.

It is not immediately obvious to me, however, that such occurrences do lack philosophical significance. Whichever side we take in this dispute, however, the Hegelian critique of Schelling's supposed essentialism is helpful in pointing out just how different these thinkers are in their nature-philosophical tendencies: while both are committed to the task of deriving the atemporal sequence of nature's stages that culminate in the emergence of the human spirit, Schelling is unique in thinking that the fundamental relationship between nature and spirit is properly understood in terms of generation, where the process of generation must be understood as minimally different from that which is generated. Indeed, it is not by coincidence that, while Schelling embraces the distinction between *natura naturans* and *natura naturata*, Hegel makes no use of it. I return to this topic in Chapter 8.

### *II Being and Negation*

Once the Hegelian acknowledges the fact that, for Schelling, identity is not antithetical to difference but is itself a process of differentiation, the question about difference can be raised at a more sophisticated level: what kind of difference is possible through indifference? Schelling has an answer to this question, although it is an answer that certainly will not reassure the Hegelian critic.

We have already considered why Schelling takes indifference to be a necessary condition for the existence of a determinate world. If there *weren't* indifference, ground and existence *couldn't be* for reasons discussed above. We have also already seen that indifference cannot in any way *be* apart from the grounds and the grounded things that it realises. As nothing

other than the becoming of grounds and their consequents, indifference is sufficient for there being such grounds and consequents. Thus, Schelling argues, 'out of indifference, duality *immediately* breaks forth.'[93] There is no reason for this breaking forth beyond indifference itself, because the breaking forth is what indifference is.

Significantly, Schelling remarks that this duality is itself 'something quite different than opposition'.[94] Not only is identity unopposed to ground and existence, then, but ground and existence are essentially unopposed to one another. (If they were essentially opposed, it would be odd for Schelling to symbolise their relationship as 'A = B'.) The non-oppositional duality of ground and existence therefore depends upon indifference or the non-ground, which is the 'positing' and 'affirmation' of that duality.[95]

That ground and existence are different from one another without being opposed—without one being the negation of the other—suggests, to the Hegelian, that their difference lacks qualitative determinacy. As Hegel argues in the opening of the *Logic*, qualitative determinacy depends upon the work of negativity, since non-being accounts for the determinacy present within being; without such non-being, no determinacy would be—there would only be 'being, pure being, without any further determination'.[96] From this perspective, ground and existence, as Schelling understands them, appear insufficiently differentiated, even if they are 'two'. Indeed, for the Hegelian, duality is a less substantial form of difference than opposition, and so Schelling's insistence on the non-oppositional relationship between ground and existence demonstrates just how undifferentiated the Schellingian universe must be.

Perhaps the Hegelian is right about this. But we should note that Schelling has his own way of thinking about difference. In the *Stuttgart Private Lectures* of 1810, he makes the following comment:

> The transition from identity to difference has often been understood as a cancellation of identity; yet that is not at all the case … Much rather it is a doubling of the essence, and thus an intensification of the unity.[97]

In Chapter 2, we considered how the development from first to second to third potency in Schelling's system involves a form of differentiation based upon 'self-duplication', where the subjective element in identity is intensified from one stage of nature to the next. This is central to why Schelling conceives of these stages as *powers* or *potencies*: no stage of nature is *opposed* to—or is a *negation of*—that which is more basic than it; rather, each stage of nature is a *determinate intensification* of the same underlying being, namely, matter. The same general point holds for the relationship between nature and spirit: spirit is not a *negation* of nature

but an intensification or further realisation of the subjective activity that already exists in the natural world.

It is true that this conception of difference has its origin in a quantitative logic, demonstrated not only by Schelling's algebraic notation and terminology but, more substantively, by the fact that determinacy is understood to be achieved through a process of duplication. In Part II, we will explore in more detail Hegel's criticism of this element of Schelling's thinking. What is worth highlighting at this point, however, is that there is a way to think about difference that does not depend on negation.[98] Hegel is right that 'Parmenides held fast to *being* and was most consistent in affirming at the same time that *nothing* absolutely is not; only *being* is';[99] and he is also right to identify Schelling as a spiritual successor of Parmenideanism:

> Those who maintain the proposition: nothing is just nothing … are unaware that in so doing they are subscribing to the abstract pantheism of the Eleatics, and also in principle to that of Spinoza. The philosophical view for which 'being is only being, nothing is only nothing', is a valid principle, merits the name 'system of identity'; this abstract identity is the essence of pantheism.[100]

What Schelling helps us see is that Hegel may *not* be right in thinking that Schelling's commitment to the Parmenidean principle prevents him from understanding determinate difference and accounting for ontological progress.[101] Although there is no progression *from* being, according to Schelling, there is a progression *within* it. It is a progression that is not motivated by an original antithesis or a relationship to something essentially *other* than it. It is also not motivated by an inner negativity that drives being to negate its character as being and *become* something antithetical to itself. Instead, this progression is motivated by the sheer fact that, given that it is *being*, being must *be*, and in order to *be* it must be determinate, it must *express* itself (see Chapter 2 above). Or, as we can put it now, after having unpacked the logic of identity presented in the *Freedom* essay: being, or the absolute, or identity *just is* the generation of grounds and their consequents.

With respect to our study of the nature-spirit relation, this means that the stages of nature and spirit are not *what they are* in *not* being what they *are not*. Organic life is not a negation of inorganic matter, nor is spirit a negation of nature; we fail to grasp the being of these things if we try to understand them in terms of negativity. The progression that leads from nature to spirit, for Schelling, is a series of intensifications of identity. More specifically, each successive stage involves the doubling of the subjective element in subject-object identity—the subjective element that was always present from the beginning—until this process terminates in

that form of life whose subjective element has finally become equal in power to its objective element, namely, the human organism. Schelling thus conceives of difference differently than Hegel does, understanding the determinate differences between the levels of reality to be intelligible without reference to any process of negation, because none of those levels are, essentially, negative.[102]

## Freedom for Good and Evil

We have now spent some time on the *Freedom* essay's discussion of the logic of identity, interpreting it as the culmination of Schelling's decade-long attempt to conceive of the emergence of spirit from nature. What we have not yet considered is the distinctive conception of spirit—and spiritual freedom in particular—that Schelling puts forward in the *Freedom* essay. At its most basic level, Schelling conceives of human freedom as the freedom to be good or evil, i.e., to have a good or bad moral character. To make sense of this form of moral self-determination, however—and to properly distinguish it from the forms of self-determination found in the strictly natural world—we must return, once again, to the concepts of ground and existence.

Above, I argued that ground and existence correspond, in a significant sense, to nature and spirit, since Schelling claims that nature is God's ground, and all there *is* is God (understood as material ground, on the one hand, and spiritual existence, on the other). When we conceive of beings as a whole, then, and consider how the most general kinds of things hang together for Schelling, we see that he understands nature to be the ground of spiritual life. Yet we can also distinguish between the ground and existence of particular things—not just reality taken as a whole. According to Schelling, for 'every being which has arisen in nature', we can distinguish between existence and ground of existence.[103] For instance, the ground of an animal's existence—that which makes it *be*—is not the animal itself as an actually existing thing; its ground is other than it. Schelling's point is not the obvious point that an animal does not bring itself into existence (although he certainly agrees that an animal is brought into existence on the basis of sexual activity by *other* members of its species.) His point, rather, is that the *way an animal actually exists* is importantly different from the fact *that it is*. An animal exists in such a way as to step *out* from its particularity in order to live out the life of its kind (and, by consequence, to give itself over to nature as a whole). But in order to do this—i.e., in order to live out a life determined by its species-being, to be an instance of its kind—that animal must first of all *be*, i.e., it must be individuated as the particular organism it is. There must necessarily be individuation for there to be an *existing* organism—'existence' thought

here in its etymological sense as *existere*, stepping forth. The ground of existence—what makes it possible for an organism to be one of its kind and, ultimately, play its role in the whole of nature's activity—is that it be an individual living thing. Significantly, this means that all that exists in nature is essentially one being; all individuated creatures step forth into unity with everything else that is. While there is minimal individuality in the natural world, that individuality is nevertheless in the service of something general or universal. And, importantly, this could not be otherwise. The living thing has no freedom to *not* live its life as the kind of thing it is, relating to the natural world around it in the manner it is determined to as a member of its species. Schelling's view here is therefore continuous with his claim in the *First Outline* that non-human organisms are not free individuals.[104]

Once the self-potentiating activity of nature generates the human organism, however, there comes to be a form of life that has the power to rearrange the relationship between ground and existence—a power that signals the transition from the natural to the spiritual. This power can be seen, first of all, by the fact that, in some instances, the unity between ground and existence is perverted. The normal relationship between these two—i.e., the norm in nature, from which there are no deviations—involves individuation in the service of the universal life of a natural kind and nature as a whole. A human individual, however, has the power to deviate from this norm by putting the universal into the service of his or her individual life.[105] In doing so, the *ground* of existence comes to *exist*, meaning individuation becomes the end or aim of that human life and all other beings (the universal) are treated as means to that end. This perverted arrangement of ground and existence is evil, according to Schelling; it is the evil of affirming oneself over all universal interests, to separate oneself from the whole and make use of others as the means of affirming one's selfhood. As Kosch puts it, 'evil is rebellion against one's place in the cosmic order. It is a striving to make oneself, as a particular creature, the centre of the universe.'[106] Goodness, by contrast, involves the human individual's free affirmation of the normative unity of ground and existence. In a good moral character, an individual affirms the universal by aligning his or her personal will with what is willed generally—putting themselves in the service of universal ends.

Whether the human individual chooses to invert the relationship between ground and existence or to affirm their healthy unity is entirely dependent upon an act of freedom. And with this freedom to rearrange or affirm the unity of ground and existence, 'something higher, the *spirit*, arises in man'.[107] Yet as we have already seen, spirit is the culmination of something at work *in nature*. In arguing that the freedom of the human individual differs in kind from the freedom of non-human organisms, Schelling in no

way abandons his earlier understanding of the continuity between nature and spirit. Natural and spiritual forms of life involve both a principle of individuation or self-relation, on the one hand, and a principle of existence or other-relation, on the other hand. Schelling continues to express this formally as A = A, where the first A symbolises subjectivity, self-relation, or withdrawal into self and the second A symbolises an outward-oriented, other-regarding activity. In all creatures, human and non-human, ground and existence are connected. And yet, despite this continuity, the transition from nature to spirit is of great significance:

> These two principles do indeed exist in all things, but without complete consonance because of the inadequacy of that which has been raised from the depths. Only in man, then, is the Word completely articulate, which in all other creatures was held back and left unfinished.[108]

To be sure, the unity between ground and existence is present throughout the whole of nature, but only in the human spirit is this unity wholly manifest, for it is only here that other-oriented activity—i.e., activity that affirms the universal—issues from the freedom of a *person*.[109] The relationship between ground and existence is therefore fully manifest only in the human individual's free decision to either invert or affirm the unity of ground and existence.

From this we can see that spirit, for Schelling, is a unique product of nature insofar as this product creatively engages with ground and existence. Spirit, therefore, is not a mere creature, but the creature in which nature's self-differentiating power becomes fully apparent in an individual. And this culmination of the essential creativity of nature appears as the ethical-ontological possibilities for goodness (the active affirmation of the ground/existence relation) and evil (the perversion of the ground/existence relation).

It is worth noting that, not only do we first catch sight of the specificity of human freedom in the *Freedom* essay when Schelling attends to the possibility of evil, but he goes on to devote far more attention in the essay to this possibility than he does to the possibility of goodness. The fact that Schelling spends far more time elucidating his conception of evil than he does elucidating his conception of goodness results in the appearance that the *Freedom* essay establishes something of a 'metaphysics of evil'.[110] Yet in noting the central role of evil in the *Freedom* essay, it is important to emphasise the point that Schelling does not understand the human to be *essentially* evil. Although the *capacity* for evil is essential to human freedom, we should not understand Schelling's anthropology to be diabolical by any means. The capacity for *goodness* is equally unique to human freedom. For only the human can *affirm* the universal will that identifies

all with all. To whatever extent rocks, plants, and animals contribute to the universal will as parts of the total organisation of nature, none of these beings takes up an ethical *stance* such that being one with alterity is freely affirmed. Such a free affirmation of the relationship between ground and existence is only a possibility for a human person. Nonetheless, the possibility for evil allows Schelling to further differentiate the human from the non-human, and thus our interpretation of Schelling's philosophy of spirit must attend to his unique conception of evil. Let us, therefore, consider Schelling's conception of evil in further detail, keeping in mind that the possibility for evil plays only one part, however integral, in his overall conception of human existence.

It is central to Schelling's conception of evil that to invert the relationship between the *ground* of spiritual existence and spiritual existence itself does *not* mean to privilege the natural, sensuous drives of animal life over some extra-sensuous, moral desire. Schelling is absolutely clear that the impetus for evil is not to be located at the level of passions or 'flesh and blood'.[111] The principle of individuality that is valued above all else in evil does not, therefore, have anything to do with privileging natural instinct over rational concerns. For this reason, human action is always different from the activity of the animal. Only through human action does a creature become capable of realising 'the deepest pit' and 'the highest heaven', neither of which are found in nature.[112] This is why, according to Schelling, heaven is opposed to hell, not to earth.[113] The possibility for evil is a possibility for a distinctive type of activity, an activity that is always misunderstood when it is equated with biological impulses.

For evil to be properly understood, it must also be seen as different in kind from goodness (again, the images of heaven and hell are important for Schelling). It is therefore an equally significant mistake, according to Schelling, to interpret evil along Augustinian lines as the privation of goodness. If evil were merely a privation of the good, it would not have any actuality *of its own*; it would merely be a lack of goodness. Such an understanding of evil as privative suggests that evil is 'something merely passive—limitation, insufficiency, deprivation—concepts which are completely at odds with the actual nature of evil'.[114] For Schelling, evil must be actual because its source is the activity of human subjectivity, the products of which cannot possibly be lacking in actuality. It would also be misleading, according to Schelling, to conceive of evil as a complete annihilation of the unity of ground and existence—as if evil were merely the *negation* of goodness: 'If unity is completely dissolved, then conflict is thereby dissolved too.'[115] In evil, there is not the *destruction* of the ground-existence relationship, but their discord: a perverted connection between the self and the universal.

Throughout the *Freedom* essay, Schelling aims to shed light on the character of evil through analogy with disease, since disease is, like evil, something bad that actually exists and is improperly understood when conceived of in terms of either privation or negation. Schelling is directly inspired by Baader in his use of such analogies, and he claims that the elucidation of the conception of evil through 'profound physical analogies, especially those of disease' allowed Baader to develop the 'only correct conception of evil as consisting of a positive perversion or reversal of the principles [of ground and existence]'.[116] According to Schelling, these comparisons between evil and disease are not meant to reduce our conception of an evil moral character to a pathological nature that might be made intelligible to biological science. Rather, such comparisons are 'the most appropriate' because disease 'occurs when the irritable principle which ought to rule as the innermost tie of forces in the quiet deep, activates itself'.[117]

In order to make sense of this idea, let's consider a passage in which Schelling himself describes the relationship between freedom and disease:

> A single organ, like the eye, is possible only in the organism as a whole; nevertheless it has a life of its own, indeed a kind of freedom, as is manifestly proved through those diseases to which it is subject.[118]

Although only the human person achieves genuine freedom, an individual eye proves to involve a limited form of freedom insofar as it has the capacity to become diseased. For the individual diseased organ cannot be accounted for with reference to the organ's function or purpose within the organism. On the contrary, the purpose of the eye's existence—its role within the animal's total organisation as an instrument for visual perception—is no longer realised in the case of ocular disease. The diseased eye thus no longer exists for the sake of the organism. Importantly, however, this is not merely a case of a *lack* of functioning or health. Something else is asserting itself as having a kind of being: *the eye*. In failing to function as an organ—i.e., in failing to play its role in visual perception—the eye demonstrates its sheer existence as the individual thing it is, an existing thing that *is* even in the case of illness, where it is not harmoniously integrated within the organism.

Something similar is at work in human evil. The decision to affirm *oneself* at the expense of all others is to prove one's individuality, but it is to do so by *perverting* the unity between oneself and all others. Indeed, in evil, what should be only the *ground* of unity—the principle of individuality—is made into an end, thereby disturbing the unity that ought to exist. We can only understand disease and evil, then, with reference to the capacity of an individual (an organ or a person) to assert itself over and against the

greater whole of which it should be a part (the organism in the case of disease and the human community in the case of evil).

As I have already remarked, Schelling does not want to reduce the phenomenon of evil to a form of disease; there are important differences between the two. Most importantly, an organ doesn't freely *decide* to become diseased, and the individuality it expresses is not the individuality of a *person*. Disease and evil are therefore ontologically distinct. Nevertheless, Schelling's analogy is highly instructive. For it helps us to see that just as disease is something *real*, evil has an ontological 'positivity'. This is not to say that there is some 'silver lining' to either disease or evil. On the contrary, Schelling's thought here is that the human suffering that results from disease and evil is *actual* suffering, and any thoughtful philosophies of life and spirit must account for the actuality of disease and evil as two distinct, yet structurally analogous, phenomena. To conceive of disease or evil as a mere lack of health or goodness is to refuse to comprehend their distinctive character as real.

While his discussion of evil owes a great deal to Baader's conception of evil, Baader is not the only philosopher who influences Schelling's thought on this topic. As Schelling himself notes, Kant's account of 'radical evil' in *Religion within the Limits of Mere Reason* is decisive for the metaphysics of evil found in the *Freedom* essay.[119] Indeed, Schelling's critique of the naturalistic conception of evil, i.e., the notion that evil can be understood as reason's capitulation to the passions, is as Kantian as it is Baaderian. And the same goes for Schelling's rejection of the Augustinian account of evil as privation of the good—this, too, is Kantian. In the *Religion* book, Kant situates radical evil outside nature and within the realm of rationality (albeit a perverse rationality). Thus, for Kant, evil and goodness do not have their origin in nature, but in human being insofar as the human is rational. Hence Kant's claim that 'the human being is alone [the] author [of his moral character]'.[120] Kant understands the freedom for goodness and evil, therefore, in terms of authorship or self-determination. Consequently, freedom is not the capacity to commit this or that act, but the capacity to determine one's moral character as a 'good or evil heart', a moral disposition which is the atemporal (i.e., strictly rational) source of all moral deeds enacted in time.[121]

In the *Freedom* essay, Schelling follows Kant's *Religion* book in its identification of human freedom with the self-determination of moral character. The freedom for goodness or evil discussed above is therefore not a decision to commit this or that good or evil act. On the contrary, such acts follow rationally from a person's moral character. More specifically, actions flow from reasons that motivate a person given their ethical orientation. As Schelling remarks, 'To be able to decide for A or ~A without any motivating reasons would, to tell the truth, only be a privilege to act

entirely *unreasonably* … If freedom cannot be saved except by making actions totally accidental'—that is, dependent on mere whim—'then it cannot be saved at all.'[122] Freedom, therefore, must not be understood as being in opposition to rationally motivated action. And since reasons *become* reasons for action on the basis of a person's moral character, it is *here* that freedom is located—in moral character.

We are not free, then, in the sense that we could, at any point in time, act otherwise. To assume that this must be the case is to assume, wrongly in Schelling's view, that freedom and necessity are opposed to one another. For Schelling, freedom is not capricious but involves rational necessity. In his words, freedom is 'that higher necessity which is equally removed from accident and from compulsion or external determination but which is, rather, an inner necessity which springs from the essence of the active agent itself.'[123] A person is not free in the sense that she can act in any way at all; rather, a person is free in the sense that her actions issue from *who she is*. Indeed, what a person does just will, as a matter of necessity, follow from her character. Schelling's thought here clearly provides little comfort to those who demand of philosophy the reassurance that this or that action of theirs is entirely undetermined, issuing from the contingency of a moment's decision. But Schelling is concerned with a deeper sense of freedom, a conception of freedom he calls *personality*, again following Kant. Indeed, it is this personality or moral character that determines any given, empirical action.

Schelling understands human freedom, therefore, as self-determination: the human individual decides upon an immoral or moral *life*. This self-determination of moral character differentiates the human from all other beings, since '[man] alone can determine himself.'[124] But because this self-determination of moral character logically precedes all historical action, 'this determination cannot occur in time; it occurs outside of time altogether.'[125] That is to say, since the decision for goodness or evil determines empirical activity in advance, the act of self-determination 'does not itself belong in time but in eternity'.[126]

These claim about the eternity of freedom require some explanation. Despite Schelling's misleading characterisation of the eternal act as taking place in a 'life before this life', the decision that determines empirical action should not be thought of as occurring at some point 'prior in time'.[127] Indeed, the act of freedom 'does not *precede* life in time but occurs *throughout* time (untouched by it) as an act eternal *by its own nature*'.[128] What might it mean to say that an eternal act is 'eternal by its own nature'? I take it that Schelling means to drive home the idea that (i) an individual's moral character has a kind of permanence; that (ii) character is not natural (in the sense of being spatiotemporal), but ideal or spiritual;[129] that (iii) character is irreducible to any of its empirical expressions; that (iv) the

determination of moral character is 'untouched by time' in the sense that what happens empirically to a person—i.e., what happens in time—does not alter who they are; and that (v) a person's moral character cannot be explained in terms of any of their particular empirical actions. Importantly, however, to say that this eternal act occurs *throughout* time suggests that the self-determination of one's moral character—while irreducible to any moment in empirical life—is indeed expressed in each and every action. The whole of one's life, then, can be seen as an atemporal act of freedom.

A concern one might raise here is that Schelling's account of human freedom doesn't look much like anything we tend to mean by the word 'freedom'. Alderwick makes the point well when she remarks that the Schellingian agent seems to:

> [lack] any existential freedom as everything that she will ever do or be throughout her life is already determined by her atemporal choice … She lacks the ability to make genuine choices in her life because her past, present and future are already fixed by the essence that she has freely chosen.[130]

Moreover, Alderwick argues, it is difficult to understand how this free choice of essential selfhood—made in some non-temporal domain—is the agent's *own* free choice, since that agent is not empirically conscious of making it.[131] 'The view leaves us with the conclusion that freedom on the temporal level is impossible and freedom at the atemporal level is unintelligible.'[132]

Alderwick goes on to make a compelling case for reading an agent's 'atemporal essence' as being constituted by acts chosen by that agent in time; drawing upon the relationship between ground and existence in the logic of identity, she argues that a person's character 'becomes more determinate as it is concretely instantiated through her free acts in the world.'[133] My own inclination is to take what might be seen as the opposite interpretive route in order to address the problem that Alderwick rightly points out: instead of seeing the Schellingian subject as making undetermined, character-constituting decisions at certain moments in time, we might argue that Schelling doesn't understand there to be 'choice' in any deliberative or conscious sense *at all*—despite his 'decisionist' rhetoric. On such a reading, a person's actions flow immediately from who they are *essentially*, *and* a person does not *choose* who they are essentially. Such a person should nevertheless be understood to be free simply in virtue of the fact that their actions follow *from their personality*; it is in this sense that a person is self-determining. I take it that McGrath defends a similar view when he emphasises Schelling's claim that the decision to be good or bad is unconscious.[134] According to McGrath's Schelling, we are no less free, and no less responsible for our actions, for not having consciously and

deliberately chosen our character; on the contrary, moral responsibility involves taking over who one unconsciously is (and even what one has unconsciously done).[135]

If who we are is 'decided' without our conscious input, how does human activity differ from the instinctive activity of animals? Simply put, animals aren't persons; they display some degree of individuality, but their actions are ultimately explicable with reference to the *kind of being they are*, what we might call their species being. It is only with the human being that *what someone does* issues from their *personal* being as the individual they are. It is in *this* sense that human freedom is a unique form of self-determination.

I take it that this account of self-determination marks a key moment in Schelling's attempt to explain the relationship between nature and spirit. According to the *Freedom* essay, what a person does just will, as a matter of necessity, follow from who that person is, because this is the nature of a human being: it is that kind of being whose actions flow from personality. And it is this type of existence for which nature has prepared the way. The atemporal development that runs from the dynamic construction of matter to the universal categories of physics and the plant and animal kingdoms culminates in a form of life that is not merely natural but also spiritual precisely insofar as it is defined by such personhood. In spiritual or human life, the organism is emancipated from its species-being to such a degree that its actions are determined not by its essence as a human but as the essential moral character of the individual. Seen from this perspective, the *Freedom* essay's account of human freedom clarifies an idea that Schelling had been working out for over a decade.

In developing a philosophical anthropology in which evil is understood to be just as real as goodness, the *Freedom* essay also departs from Schelling's earlier thought. It is worthwhile to briefly consider this difference. The most helpful text with which to compare the essay is the *System* of 1804. While the *System* does not identify evil with a privation of goodness, it nevertheless places evil within a hierarchy of reality, such that evil is understood to be less expressive of reason—and therefore less expressive of freedom—than goodness is. As we have seen, the *Freedom* essay (especially its first half) differs in pointing towards the substantive reality of evil in the world, such that an orientation towards evil and an orientation towards the good are understood to be equally free.

From this perspective, the *Freedom* essay is arguably a superior resource for thinking about human personality and the nature of evil. Yet from another and equally important perspective, we can see that the *System* of 1804 is more insightful than it is typically given credit when it comes to the topic of evil. Note that, in the discussions of evil in both the *System* and the *Freedom* essay, Schelling has in mind the evil of *selfishness*. For Schelling, evil—or, perhaps more accurately, badness—is essentially the

sin of pride, the sin of privileging oneself over and above God and, in this way, over and above the whole of existence. Schelling is not unique in understanding pride to be the essence of evil; as Judith Shklar points out, this is a key move in Christian philosophy—one that often comes at the expense of ignoring the moral significance of other vices, such as cruelty.[136] One might think that, insofar as evil *is* equated with selfishness, the earlier Schelling was right all along: such selfishness is simply bad *for the individual* who, in exhibiting such selfishness, fails to maximally realise the divine freedom that is immanent to her.[137] Perhaps the person who puts herself before all others does not substantially alter the relationship between ground and existence in an act of radical freedom, but simply fails to make fully actual her own rationality. If this is right—and I offer only observations here, no arguments—then the pathway cleared by the *Freedom* essay is ambiguous: on the one hand, it retreats from the earlier Schelling's insight that the badness of selfishness is not, in fact, a kind of radical evil, but merely a lesser degree of human perfection; on the other hand, the essay points the way towards an understanding of the full reality of human badness, which is perhaps more complicated than—and, indeed, worse than—mere selfishness. Although Schelling himself does not think of evil in terms of cruelty or sadism, his account of evil as something that has distinctive being—irreducible to a lack of goodness or to a lesser degree of perfection—lays the conceptual ground for subsequent accounts of the reality of human evil, accounts that concern themselves not with love of self but love of others' suffering.[138]

## Freedom, Necessity, Will

Although Schelling is insistent upon the reality of human evil, he is also fully committed to the modern celebration of human existence. And this is so despite his criticism of modern European philosophy for its supposedly narrow focus on the mind or the human subject. We have seen, for instance, that he champions some version of the Kantian conception of human freedom. Indeed, according to Schelling, it is only with Kantian idealism that the Cartesian subject comes to be properly understood in terms of moral self-determination.[139] This is why, despite there being earlier accounts of human freedom in the history of philosophy, 'the true conception of freedom was lacking in all modern systems … until the discovery of *Idealism*.'[140]

We have also seen that, following a certain reading of Kant, Schelling conceives of freedom along necessitarian lines. Schelling is well aware, however, that freedom is ordinarily understood to be opposed to necessity, in the sense that a free action is presumed to be free from any form of necessary determination. Getting the relationship between freedom and

necessity right, then—and overcoming our preconceptions about their supposed mutual exclusivity—is of the utmost importance. He therefore begins the *Freedom* essay by remarking that, although the conceptual pair, 'nature and spirit', has been highly significant to recent philosophy, it is in fact by reflecting upon the relationship between freedom and necessity that the 'center of philosophy comes to view.'[141]

Importantly, however, when we consider the manner in which Schelling understands this relationship, we find that he has in no way abandoned his earlier interest in clarifying the nature-spirit relation. But to see this, we need to first note that, for Schelling, freedom and necessity are unopposed to one another in more than one way. We have already considered the view that human freedom is unopposed to necessity insofar as a person's actions follow necessarily from who they are. But this is to focus exclusively on *human* freedom and *human* necessity. There is a further sense in which human freedom and necessity are united, and here Schelling distances himself from Kantian idealism. Although the human individual is self-determining in the manner discussed above, she also originates, in an important sense, in nature. Indeed, human freedom is utterly dependent upon a natural order that is itself structured according to rational necessity on the basis of nature's own self-determining activity. Setting aside for the moment nature's self-determination, we can note that this first of all means that human freedom is united with the natural domain upon which it is based. Schelling fully understands that this may appear to be paradoxical, but he argues that such dependence is entirely consistent with freedom:

> Dependence [*Abhängigkeit*] does not exclude independence [*Selbständigkeit*] or even freedom. Dependence does not determine the essential being [*Wesen*] of the dependent, and merely declares that the dependent entity, whatever else it may be, can only be as a consequence of that upon which it is dependent; it does not declare what this dependent entity *is* or *is not*.[142]

That human freedom depends upon nature in order for it to exist does not, therefore, mean that nature determines the moral character of any individual. On the contrary, spiritual subjectivity is *self*-determining, precisely because it is generated *as* free existence by its natural ground. This logic of 'dependent independence' is not limited to the sphere of spiritual freedom, but can also be seen in organic life. As Schelling writes, 'Every organic individual, insofar as it has come into being, is dependent upon another organism with respect to its genesis but not at all with regard to its essential being.'[143] And although human freedom achieves an independence that exceeds that of the merely organic being, this nature-philosophical distinction between dependence with respect to *origination* and independence

with respect to *essential being* (*Wesen*) is crucial for understanding Schelling's departure from earlier idealist conceptions of human freedom. On Schelling's view, it is only possible to account for the self-determining freedom of the human subject if one understands this freedom in light of its natural basis. The Schellingian point here follows directly from the logic of identity discussed above, and it is straightforwardly emergentist, down to the very language of 'dependent independence'.[144]

To recognise this is also to recognise Schelling's continued commitment to some form of Spinozism. For Spinoza's system represents to Schelling an unapologetic turn to nature itself. The ultimate explanation for moral self-determination—a form of freedom that Spinoza himself was without the resources to properly grasp—is the self-determination of nature, i.e., the entirely non-personal and non-spiritual form of self-determination that is, like human freedom, both free and necessary. Such natural self-determination is free because it is entirely self-directed or autonomous; and it is necessary because the products that result from this activity—as well as the potencies or levels of nature—could not have gone unrealised.

Spinoza, of course, conceives of this ultimate explanation to which the philosopher must turn her attention not only as nature but as God.[145] This, as we have seen, is where Schelling moves beyond Spinoza's *specific* form of pantheistic necessitarianism. For Schelling, nature can be understood as God only in a qualified sense, namely, as the divine basis of God's personal existence—a personal existence that is rejected by Spinoza. Another way to say this is that, for Schelling, nature is not exhaustive of what *is*; there are *other* forms of self-determination, forms of self-determination that should not be understood as natural but spiritual. As he puts it in the *Lectures on the Philosophy of Art*, 'phenomenal nature as such is not a complete revelation of God'.[146] But, significantly, Schelling thinks that those extra-natural forms of self-determination can be explained as *necessarily* developing *out* of nature, or God's activity 'in the basis'. Consequently, for Schelling, there is a necessary development *in* God that cannot be grasped from within an orthodox Spinozist framework. Thus, he remarks, 'Spinozism does not err at all in asserting … an inviolable necessity in God, but only in taking this in a lifeless and impersonal way.'[147] Schelling's criticism of Spinoza therefore has nothing to do with a dismissal of all necessitarian conceptions of God, nature, or humanity. The problem, instead, is that the rational necessity at work in nature is understood as non-developmental—a consequence, in part, of Spinoza's reliance on Cartesian physics—which prevents Spinoza from recognising that divine activity is not only operative in nature but that this activity becomes the 'love and goodness' of a personal God.[148] Indeed, just as for Hegel Spinoza fails to see that substance *becomes subject*, for Schelling, the living God does not remain brute nature but becomes spirit and personality. The problem with

Spinoza, then, is not his identification of God and nature or his necessitarianism but with the insistence that God *remains* nature and does not become personal within the life of the human community, realising a form of rationally necessary activity that is rightly understood as *spiritual*.

To emphasise this development of nature into spirit, Schelling conceives of nature as an impersonal will or a 'will of the depths'. Against the anti-volitionist theism of Spinoza's *Ethics*, he argues—drawing heavily upon Jakob Boehme—that God's activity in nature is an unconscious and non-personal *longing* to exist *as personal*, i.e., as spirit. Here we hit upon a new way of answering the question about why beings exist—and, more specifically, why the series of forms that runs from nature to spirit must be realised: there is a primordial yearning or longing for being.

That Schelling now refers to God's longing for personal existence has suggested to many readers that he is departing in a profound way from his earlier thought. Brown, for example, argues that Schelling 'turned away from the objective idealism of his youth' in the 'metaphysical voluntarism' of the *Freedom* essay and the *Ages of the World*'.[149] A central element in such interpretations is that, with the apparently new theology of the *Freedom* essay, everything that happens as a result of divine will is understood to be contingent. Stone, for instance, argues that, according to the *Freedom* essay, 'it is a matter of sheer contingency and gratuity that anything exists at all'.[150] But I think this goes too far in interpreting the *Freedom* essay as a first step towards Schelling's later thought. In my view, the volitional language of the *Freedom* essay is meant to drive home the point that nature's activity is *self-directed* and *teleological*; it does not follow from the self-directed and teleological character of nature that its activity is *undetermined* or *contingent*. On the contrary, that there is a striving at the heart of nature to generate freer and freer kinds or forms is a *necessary* feature of *what nature is*. Nature couldn't do otherwise than to will the existence of its series of stages, just as the free individual is without the resources to will an action that contradicts who she is. When we follow Schelling in conceiving of nature as God's pre-personal yet volitional activity, we find that the same logic is at work: God could not have willed otherwise than to become spirit through a graduated sequence of stages.[151]

This latter point also helps us to see that, while Schelling embraces the conception of a divine will oriented towards a determinate end—and while he is, in this respect, thinking against Spinoza—he does not conceive of this divine will as *conscious*. Central to Schelling's account of will in the *Freedom* essay is a distinction between two types of willing: 'the longing of the One to give birth to itself, or the will of the depths' and 'the will of love through which the Word is pronounced in nature and through which God first makes himself personal'.[152] The two kinds of will correspond to the will of God as *ground* and the will of God as *existence*, the latter

being dependent upon the emergence of human spirit for its realisation. And, importantly, the will of the depths is *unconscious* will, 'like desire or passion, and most readily comparable to the beautiful urge of a developing being striving to unfold itself'.[153] The will of love, by contrast, is particular to personality—human and divine—and does not seek to unfold *itself* but to unite with *others*. That Schelling understands the development of nature in terms of 'will' does not, then, mean that there is anything personal about this will, nor does it mean there is any conscious deliberation occurring prior to the generation of *what is*; the will of the depths is simply the striving of nature to fully express the absolute (which must, ultimately, become conscious). As Michael Vater has argued, Schelling's volitional metaphysics of 1809 is in fact not so far removed from the more straightforwardly Spinozist metaphysics of 1804; in both cases, being *is* because it necessarily *affirms* itself.[154]

We can conclude our study of Schelling's *Freedom* essay by noting that, despite the difference between the will of nature and the will of humanity, there remains an inner unity here. Just as the early Schelling conceives of nature and spirit as different expressions of the absolute (or reason), the *Freedom* essay describes nature and spirit as different forms of willing. Thus, 'in the final and highest instance there is no other Being than Will. Will is primordial Being.'[155] Of course, we will not grasp the unity of the blind will of nature and moral self-determination if we forget the lessons of Schelling's logic of identity and imagine that the will of nature and the will of humanity are two aspects of some third thing called will. Their connection runs much deeper than this; it is one of explication, in which the will of humanity realises something that was only implicit in the will of nature:

> It can readily be seen that in the tension of longing necessary to bring things completely to birth the innermost nexus of the forces can only be released in a graded evolution, and at every stage in the division of forces there is developed out of nature a new being whose soul must be all the more perfect the more differentiatedly it contains what was left undifferentiated in the others. It is the task of a complete philosophy of nature to show how each successive process more closely approaches the essence of nature, until in the highest division of forces the innermost center is disclosed.[156]

In what sense is the 'innermost center' of nature disclosed in humanity? How does the human spirit—the most perfect creation of nature—make apparent the *essence* of nature? The 'innermost center of nature', according to Schelling, is the creative power that makes things *be* as the individual things they are (namely, as instances of general kinds). And as we have

seen, the human form of life emerges as distinct from every *natural* form insofar as the human individual exhibits more fully the creativity of nature itself: because the human being can will either the good or the bad, she demonstrates a kind of creativity that is unparalleled in the merely organic realm. For this moral power is ontological; it is the power to either affirm and therefore perfect, or deny and therefore pervert, the appropriate relationship between existence and the ground of existence. The will of the human, which actively engages with the relationship between ground and existence, repeats at a higher level the primordial will of nature, through which all of nature's products and potencies are generated.

I have argued here and throughout the last three chapters that the 'graded evolution' that ultimately leads to the generation of spirit is not a historical process. But there is good reason that many readers of Schelling have seen in the *Freedom* essay the beginning of his turn to a 'historical absolute'.[157] To be sure, the history that Schelling engages explicitly in this essay is only human history (and the divinity that acts through human history); the process of nature's development into spirit continues to be understood as a strictly rational and atemporal process. But if the creativity of the *human will* makes possible a *history* in the strongest sense of the term—and if, as we have just seen, the creativity of the human realises anew the creativity at work in the heart of *nature*—then perhaps *nature's* creativity might also be understood to be properly historical, i.e., as involving chronological developments worthy of philosophical reflection. I will return to this suggestion in the final chapter of this book.

## Notes

1 *SW* I/7: 334; *Freedom*, p. 4. Translation modified.
2 See Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 7–9.
3 Sebastian Schwenzfeuer, *Natur und Subjekt*, p. 8. Charlotte Alderwick, *Schelling's Ontology of Powers* (Edinburgh: Edinburgh University Press, 2021), pp. 160, 188.
4 *SW* I/7: 357; *Freedom*, p. 31.
5 As Michael Vater remarks, the human is 'poised on top of the pyramid of nature as the … sole point of connection between nature and spirit.' Michael Vater, 'Reconfiguring Identity in Schelling's *Würzburg System*, *Schelling-Studien* 2 (2014), p. 135.
6 *SW* I/6: 488; *System* (Second Part), p. 104.
7 *SW* I/6: 396; *System* (Second Part), p. 100.
8 *SW* I/6: 488; *System* (Second Part), p. 104. See also the late Schelling's comments about the adroitness of the human organism in the *Presentation*

*of the Purely Rational Philosophy*: *SW* II/1: 443, 448–449, *Presentation of the Purely Rational Philosophy*, trans. Iain Hamilton Grant in *The Schelling Reader*, ed. Benjamin Berger and Daniel Whistler (London: Bloomsbury, 2021), pp. 152–153.

9 *SW* I/6: 488; *System* (Second Part), p. 104.

10 To put this in Herderian-Kielmeyerian language, the human being has a relatively high degree of irritability; in Aristotelian language, the human has the power of locomotion, just as animals do.

11 *SW* I/4: 211; *Presentation*, p. 204.

12 *SW* I/4: 210–211; *Presentation*, p. 204.

13 *SW* I/6: 499.

14 *SW* I/6: 499.

15 *SW* I/6: 499.

16 According to Schelling, all errors in philosophy can be explained by referring to the fact that philosophers frequently fail to take this first step of abstraction (*SW* I/6: 496). Cf. Johnston, who argues that Schelling's monism prevents him from developing a coherent philosophical account of error. Adrian Johnston, 'Monism and Mistakes: Schelling and the Latest System-Program of German Idealism' in *German Idealism and Poststructuralism*, ed. Tilottama Rajan and Daniel Whistler (Basingstoke: Palgrave Macmillan, forthcoming).

17 *SW* I/6: 541; *System* (Second Part), p. 299.

18 This is analogous to the way the forces of nature and the qualitative determinacy in nature constitute one and the same being, namely, matter.

19 *SW* I/6: 551; *System* (Second Part), p. 300.

20 *SW* I/6: 542; *System* (Second Part), p. 300. 'We do not act … divine necessity'—that is, rational necessity—'acts in us.' *SW* I/6: 554; *System* (Second Part), p. 301.

21 Alan White, *Schelling: An Introduction to the System of Freedom* (New Haven: Yale University Press, 1983), p. 106.

22 *SW* I/6: 552; *System* (Second Part), p. 300.

23 *SW* I/6: 569.

24 *SW* I/6: 563. The similarities here and elsewhere between Schelling's thought and Stoicism are significant. Despite the hostile reception of Stoicism in classical German philosophy, it is not entirely surprising that we find Schelling in close proximity to ancient Stoicism, since he combines Spinozism with a species of teleological explanation.

25 *SW* I/6: 563.

26 *SW* I/6: 569.

27 See, for instance, *SW* I/3: 629; *System of Transcendental Idealism*, pp. 232–233; *SW* I/5: 279–280; *On University Studies*, p. 75; *SW* I/7: 142; *Aphorisms as an Introduction to Naturphilosophie*, p. 245; and *SW* I/8: 200; *The Ages of the World* (1815), xxxv.

28 *SW* I/6: 574.

29 *SW* I/6: 505.

30 *SW* I/6: 494.

31 *SW* I/2: 56; *Ideas*, p. 42.

32 Lovejoy, *The Great Chain of Being*, p. 317. Matt Ffychte, *The Foundation of the Unconscious: Schelling, Freud and the Birth of the Modern Psyche* (Cambridge: Cambridge University Press, 2011), pp. 86–89.
33 McGrath, *The Philosophical Foundations of the Late Schelling*, p. 65.
34 McGrath, 'Is the Late Schelling Still Doing Nature-Philosophy?', *Angelaki: The Journal of the Theoretical Humanities* 21.4 (2016), p. 124.
35 White, *Schelling*, p. 6. The whole of White's *Schelling* is an attempt to understand the various ways that Schelling supposedly sought to develop a system of freedom in opposition to Spinoza. White follows Heidegger here, who remarks in his 1936 lecture course on the *Freedom* essay that 'if Schelling fundamentally fought against a system, it is Spinoza's system.' Heidegger, *Schelling's Treatise on the Essence of Human Freedom*, p. 34. Emphasis modified.
36 White, *Schelling*, p. 142.
37 White, *Schelling*, p. 142.
38 Michelle Kosch, *Freedom and Reason in Kant, Schelling, and Kierkegaard* (Oxford: Oxford University Press, 2006), p. 87. See also Brown, *The Later Philosophy of Schelling*, pp. 116–117 and Lisa Egloff, *Das Böse als Vollzug menschlicher Freiheit: Die Neuausrichtung idealistischer Systemphilosophie in Schellings Freiheitsschrift* (Berlin: De Gruyter, 2016), pp. 22–26.
39 Wirth, *Schelling's Practice of the Wild*, p. 64.
40 For a recent and detailed account of Schelling's evolving relationship to Spinoza, see Benjamin Norris, *Schelling and Spinoza: Realism, Idealism, and the Absolute* (Albany: State University of New York Press, 2022).
41 Wirth, *Schelling's Practice of the Wild*, p. 64. While I am very much in agreement with Wirth on this point, I do not emphasise—as he does—that the *Freedom* essay can be seen at one and the same time as Spinozist and as a turn to the late philosophy. Cf. Jason M. Wirth, *The Conspiracy of Life: Meditations on Schelling and His Time* (Albany: State University of New York Press, 2003), p. 156.
42 *SW* I/7: 349; *Freedom*, p. 22.
43 *SW* I/7: 350; *Freedom*, p. 23.
44 Letter 81, Spinoza to Tschirnhaus (5 May 1676) in *The Collected Works of Spinoza*, Volume II, trans. Edwin Curley (Princeton and Oxford: Princeton University Press, 2016), p. 485. See also Letter 83, Spinoza to Tschirnhaus (15 July 1676) in *The Collected Works of Spinoza*, Volume II, p. 487. Schelling refers to Letter 83 in the substantive introduction to the 1806 and 1809 editions of *On the World-Soul*. See *SW* I/2: 359; *Treatise on the Relationship*, p. 239.
45 *SW* I/7: 349; *Freedom*, p. 22.
46 *SW* I/7: 350; *Freedom*, pp. 23–24. Translation modified.
47 See *Ethics* II, Proposition 7, Scholium.
48 In what follows, I emphasise the difference between Schelling's 1809 essay and his earlier thought regarding the nature of evil. There is, however, significant continuity here as well, even with respect to the concept of evil specifically. For an excellent analysis of the early Schelling on evil, with attention paid to the continuity between this and the essay on human freedom, see Daniel

J. Smith, 'An Ethics of Temptation: Schelling's Contribution to the Freedom Controversy', *European Journal of Philosophy* 29.4 (2021), 731–745.

49 *Ethics* IV, Definition 2. See also Spinoza's remark that 'the terms "good" and "bad" … indicate nothing positive in things considered in themselves, and are nothing but modes of thinking.' Spinoza, *Ethics, Treatise on The Emendation of the Intellect, and Selected Letters*, trans. Samuel Shirley (Indianapolis: Hackett Publishing Company, 1992), Preface to Part IV of the *Ethics*, p. 153. Nietzsche was very much aware of his proximity to Spinoza in this regard. See Nietzsche, Postcard to Overbeck (30 July 1881) in *The Portable Nietzsche*, ed. and trans. Walter Kaufmann (New York: Penguin, 1976), p. 92.

50 *SW* I/6: 546–547.

51 For this reason, McGrath remarks that the essay makes a significant advance upon the system identity, which 'could not explain the fact of moral evil'. McGrath, *The Philosophical Foundations of the Late Schelling*, p. 65.

52 *SW* I/7: 339; *Freedom*, p. 10.

53 *SW* I/7: 341; *Freedom*, p. 13.

54 See Schelling's criticism of Reinhold for misconstruing identity in Spinoza's thought and in Schelling's own thought as mere sameness: *SW* I/7: 342n; *Freedom*, p. 14n.

55 *SW* I/7: 345; *Freedom*, p. 18. Emphasis modified.

56 *SW* I/7: 342; *Freedom*, p. 14. Translation modified. As Manfred Frank argues, Schelling is drawing here upon the Leibnizian school, and in doing so he is departing significantly from Kant's account of judgement. See Manfred Frank, *'Reduplikative Identität': Der Schlüssel zu Schellings reifer Philosophie* (Stuttgart-Bad Cannstatt: Frommann-Holzboog, 2018), especially pp. 154–165 and 213–219.

57 *SW* I/7: 341–342; *Freedom*, pp. 13–14.

58 *SW* I/7: 357; *Freedom*, p. 31. Emphasis and translation modified.

59 *SW* I/4: 130; *Presentation*, p. 155. See also §§ 52–54, 92, 95–96, and 99 of the *Presentation*, as well as § 39 of the 1804 *System* (*SW* I/6: 193; *System* [First Part], p. 179).

60 *SW* I/4: 116; *Presentation*, p. 147.

61 What is more, Schelling goes on to say that this distinction is precisely what differentiates his thought from Spinoza's. *SW* I/7: 357; *Freedom*, pp. 31–32. To the extent that Schelling is right that his earlier philosophy of nature already involves this logic of identity, in which ground and consequent differ, we can see that even the earlier work is moving beyond an orthodox Spinozism that cannot account for a key difference between nature and spirit (as discussed below). Not all readers of Schelling are convinced, however, of this continuity. Egloff, for example, argues that the similarity between the claim in the *Presentation* and the *Freedom* essay is superficial. See Egloff, *Das Böse als Vollzug menschlicher Freiheit*, p. 212.

62 *SW* I/3: 306; *Introduction to the Outline*, p. 217.

63 Schwenzfeuer, *Natur und Subjekt*, p. 253. I depart from Schwenzfeuer's reading insofar as I see ground as some type of cause, explanation, or logical reason for that which exists, just as I have suggested that a lower potency is

some type of cause, explanation, or logical reason for the higher potencies. Cf. Schwenzfeuer, *Natur und Subjekt*, pp. 258–260.

64 *SW* I/7: 358; *Freedom*, p. 32.

65 *SW* I/7: 398; *Freedom*, p. 78.

66 *SW* I/7: 358–359; *Freedom*, p. 33. Emphasis modified.

67 *SW* I/7: 358; *Freedom*, p. 33. Emphasis modified.

68 *SW* I/7: 358; *Freedom*, p. 33.

69 As Heidegger insightfully puts the point, 'Schelling was granted the profoundest grasp of the spirit *because* he begins with the philosophy of nature and straightaway recognizes its importance for the system.' Heidegger, *Mindfulness*, trans. Parvis Emad and Thomas Kalary (New York: Continuum, 2006), p. 233. Emphasis modified.

70 *SW* I/7: 356; *Freedom*, p. 30.

71 See Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 140–155, especially 152–155.

72 *SW* I/9: 3–4; *Clara*, p. 3.

73 *SW* I/9: 7; *Clara*, p. 5.

74 One of the hermeneutic risks involved in reading the *Freedom* essay from the perspective of the late Schelling is that it can obscure this achievement—or, at the very least, this attempt of Schelling's to formulate a logic of emergence and affirm the proper relationship between the philosophy of nature and the philosophy of spirit.

75 *SW* I/7: 363; *Freedom*, p. 39. As he puts it in the *Lectures on the Method of Academic Study*,

> The purpose of [man's] existence is to develop that without which God's revelation is not total—for nature contains the whole of the divine essence in its real aspect. Man as a rational being is meant to express the image of the same divine nature as it is in itself, i.e., in its ideal aspect.
>
> (SW I/5: 218; *On University Studies*, p. 12)

76 White, *Schelling*, p. 135.

77 *SW* I/7: 412; *Freedom*, p. 93. Emphasis modified.

78 *SW* I/4: 328; *Bruno*, p. 221.

79 For a discussion of Schelling's evolving conception of identity, indifference, and their difference from one another, see Schwenzfeuer, *Natur und Subjekt*, pp. 236–244.

80 Heidegger is helpful in describing the idealist conception of identity as a 'belonging-together' that is not external to that which is brought together. He remarks that the German idealist conception of absolute identity is:

> not just the belonging-together of subject and object, but making this belonging-together possible; the absolute has its actuality precisely in this making-possible. [The absolute is] the *becoming* of what is, in the whole of its Being, and according to the essential laws of becoming that belong to its essence.

Heidegger, *Being and Truth*, trans. Gregory Fried and Richard Polt (Bloomington: Indiana University Press, 2010), p. 60. Emphasis modified.

Heidegger is in fact describing Hegel's conception of absolute identity in this passage, but the interpretation stands for Schelling as well. As Heidegger puts it in his lecture course on the *Freedom* essay,

> With respect to [the] higher concept of identity, Schelling can say … that identity is truly not a dead relation of indifferent and sterile identicalness, but 'unity' is directly productive, 'creative,' and progressing toward others … Externally viewed, the proposition ['the body is a body'] looks as if the predicate simply returned to the subject. But in truth a progression and a bringing forth is contained here.
>
> (Heidegger, *Schelling's Treatise*, pp. 78–79)

81 *SW* I/7: 406; *Freedom*, p. 87. Emphasis modified.
82 *SW* I/2: 374; *Treatise on the Relationship*, p. 248. Translation modified.
83 *SW* I/2: 361; *Treatise on the Relationship*, p. 240.
84 *W* 3: 22; *Phenomenology*, p. 9.
85 Manfred Buhr, 'Geschichtliche Vernunft und Naturgeschichte: "Neue" Anmerkungen zur Differenz des Fichteschen und Schellingschen Systems der Philosophie' in *Natur und geschichtlicher Prozeß: Studien zur Naturphilosophie F.W.J. Schellings*, ed. Hans Jörg Sandkühler (Frankfurt am Main: Suhrkamp, 1984), p. 229.
86 Grant, *Philosophies of Nature After Schelling*, p. 174. See also Frank, who remarks that '"identity" for Schelling does not mean the non-being of difference' (Frank, *'Reduplikative Identität'*, pp. 118–119); on the contrary, according to Frank, if we think of identity as some *x* which is in one respect nature and in another respect spirit, identity—*x*—makes the difference between nature and spirit possible. See Frank, *'Reduplikative Identität'*, pp. 172–174.
87 See John 6:35, 48; John 8:12; John 10:7, 11; John 11:25; John 14:6; and John 15:1, all of which refer back to God's statement to Moses, *hineinei*, 'I am that I am' (Exodus 3:14)—itself a claim that is very much at work, it seems to me, in Schelling's conception of the 'identity of identity' (*SW* I/4: 121; *Presentation*, p. 150).
88 *SW* I/7: 406; *Freedom* essay, p. 87.
89 White, *Schelling*, p. 132.
90 Grant has been insistent on this point in *Philosophies of Nature After Schelling* and elsewhere.
91 This is connected to a key difference between Schelling and Hegel regarding what they take to be the key insights of Boehme's theosophy. See Glenn Alexander Magee, who argues that, although Hegel is significantly influenced by Boehme—and although Hegel's critique of Schelling is rightly understood as 'exhorting Schelling to become more Boehmean'—'Hegel never mentions Boehme's *Ungrund*, apparently considering it a dispensable part of Boehme's philosophy.' Glenn Alexander Magee, *Hegel and the Hermetic Tradition* (Ithaca: Cornell University Press, 2001), p. 137.
92 See Whistler, 'Schelling on Individuation', pp. 329–344.
93 *SW* I/7: 407; *Freedom*, p. 88. Emphasis modified.

94 *SW* I/7: 407; *Freedom*, p. 88.
95 *SW* I/7: 407; *Freedom*, p. 88. Translation modified.
96 *W* 5: 82; *The Science of Logic*, trans. A.V. Miller (Amherst: Humanity Books, 1969), p. 82.
97 *SW* I/7: 424–425; *Stuttgart Seminars*, p. 200.
98 See Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 115–131. See also *Difference and Repetition*, in which Deleuze notes that Schelling conceives of the process of differentiation as being motivated by something other than negation or contradiction, and for this reason argues that Schelling's system of powers or potencies is superior to Hegel's system. Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Continuum, 2004), p. 240. Significantly, the kind of difference at work in negation or contradiction, one might argue, is not productive or creative. Cf. Frank, *Der unendliche Mangel an Sein: Schellings Hegelkritik und die Anfänge der Marxschen Dialektik* (Munich: Wilhelm Fink, 1992), p. 39. On Schelling's affirmation—against Hegel—of a (weakened) principle of non-contradiction, see Frank, *'Reduplikative Identität'*, p. 173n.
99 *W* 5: 98; *Science of Logic* (Miller), p. 94.
100 *W* 5: 85; *Science of Logic* (Miller), p. 84. Emphasis modified.
101 *W* 5: 98–99; *Science of Logic* (Miller), pp. 94–95.
102 Schelling does not, then, make what Michael Della Rocca has called 'The Parmenidean Ascent', which denies *all* forms of determinate difference. Cf. Michael Della Rocca, *The Parmenidean Ascent* (Oxford: Oxford University Press, 2020). There is, it seems to me, more than one way to be a Parmenidean.
103 *SW* I/7: 362; *Freedom*, p. 37.
104 *SW* I/3: 189–190; *First Outline*, p. 137.
105 *SW* I/7: 365; *Freedom*, p. 40.
106 Kosch, *Freedom and Reason in Kant, Schelling, and Kierkegaard*, p. 100.
107 *SW* I/7: 363; *Freedom*, p. 39.
108 *SW* I/7: 363–364; *Freedom*, p. 39.
109 According to Schelling:

> That dark principle is indeed effective in animals too, as in every other natural being; but in them it has not yet been born to light as in man, it is not *spirit* and understanding but blind passion and desire; in short no degeneration, no division of principles is possible here where there is as yet no absolute or personal unity.
>
> (*SW* I/7: 372; *Freedom*, pp. 48–49)

110 Cf. Heidegger, *Schelling's Treatise on the Essence of Human Freedom*, p. 104.
111 *SW* I/7: 388; *Freedom*, pp. 66–67.
112 *SW* I/7: 363; *Freedom*, p. 38.
113 *SW* I/7: 371; *Freedom*, p. 47.
114 *SW* I/7: 368; *Freedom*, p. 44.
115 *SW* I/7: 371; *Freedom*, p. 47.
116 *SW* I/7: 366; *Freedom*, p. 42.
117 *SW* I/7: 366; *Freedom*, pp. 41–42.

118 *SW* I/7: 346; *Freedom*, p. 19.
119 *SW* I/7: 388; *Freedom*, p. 67.
120 *KGS* VI: 21; *Religion within the Boundaries of Mere Reason*, trans. George di Giovanni in *Religion and Rational Theology*, ed. Allen Wood and George di Giovanni (Cambridge: Cambridge University Press, 1996), p. 71.
121 *KGS* VI: 29; *Religion within the Boundaries of Mere Reason*, p. 77.
122 *SW* I/7: 382–383; *Freedom*, p. 60. Emphasis modified.
123 *SW* I/7: 383; *Freedom*, p. 61.
124 *SW* I/7: 385; *Freedom*, p. 63.
125 *SW* I/7: 385; *Freedom*, p. 63.
126 *SW* I/7: 385; *Freedom*, p. 63.
127 *SW* I/7: 387; *Freedom*, p. 65.
128 *SW* I/7: 385–386; *Freedom*, p. 64. Emphasis modified.
129 As Schelling writes in the *Clara*, 'freedom rises up in this world from necessity's obscurity, bursting forth … as a flash of eternity'. *SW* I/9: 38; *Clara*, p. 28. Whether one affirms the unity of ground and existence in the constitution of a good moral character or one perverts the unity of ground and existence in the constitution of an evil moral character, one creatively engages with the very structure of being in a manner that is beyond the realm of possibility for any strictly spatiotemporal being. This is because natural beings, by definition, must give themselves over to the life of the species to which they belong. The human spirit, on the other hand, either freely *undermines* the universal order or freely *affirms* it; either way, the self-determination of moral character amounts to an ethical-ontological determination that alters the ordinary configuration of ground and existence as it is expressed in nature.
130 Alderwick, *Schelling's Ontology of Powers*, p. 151.
131 Alderwick, *Schelling's Ontology of Powers*, p. 151.
132 Alderwick, *Schelling's Ontology of Powers*, p. 151.
133 Alderwick, *Schelling's Ontology of Powers*, p. 159. See also Alderwick, 'Atemporal Essence and Existential Freedom in Schelling', *British Journal for the History of Philosophy* 23.1 (2015), 115–137.
134 McGrath, *The Dark Ground of Spirit*, pp. 134–135.
135 McGrath, *The Dark Ground of Spirit*, pp. 137–138.
136 Judith Shklar, *Ordinary Vices* (Cambridge, MA and London: Harvard University Press, 1984), p. 8.
137 *SW* I/6: 547.
138 See Jean Améry, *At the Mind's Limit: Contemplations by a Survivor on Auschwitz and its Realities*, trans. Sidney Rosenfeld and Stella P. Rosenfeld (Bloomington & Indianapolis: Indiana University Press, 1980), pp. 21–40.
139 *SW* I/7; 385; *Freedom*, p. 63.
140 *SW* I/7: 345; *Freedom*, p. 17. Emphasis modified. See also *SW* I/7: 383; *Freedom*, p. 61: 'It was, indeed, Idealism which first raised the doctrine of freedom into that realm in which it alone can be understood.'
141 *SW* I/7: 333; *Freedom*, p. 3.
142 *SW* I/7: 346; *Freedom*, p. 18. Emphasis and translation modified.
143 *SW* I/7: 346; *Freedom*, p. 18.
144 See Wilson, *Metaphysical Emergence*, p. 1.

145 *Ethics* IV, Preface.
146 *SW* I/5: 378; *Philosophy of Art*, p. 27. Emphasis modified. As this passage makes clear, not even *living* nature is a complete manifestation of God. See also *SW* I/3: 332; *System of Transcendental Idealism*, p. 3.
147 *SW* I/7: 397; *Freedom*, p. 77.
148 *SW* I/7: 397; *Freedom*, p. 77.
149 Brown, *The Later Philosophy of Schelling*, p. 14.
150 Alison Stone, *Being Born: Birth and Philosophy* (Oxford: Oxford University Press, 2019), p. 139. See also Bruno, editor's introduction to *Schelling's Philosophy*, p. 3.
151 Even if one understands Schelling to be arguing, in 1809, that God is free from necessity in his act of creation, there is nevertheless an undeniable kind of necessity involved in the creation of the human spirit. Thomas Buchheim makes this clear. According to Buchheim—and this view is consistent with the late Schelling—*if* God decides to create the world, then the world must include human beings who are free to do good and evil; this is the only world that God could, morally speaking, create. In this way, Buchheim argues, the *Freedom* essay reduces the possible worlds of Leibnizian metaphysics to a single possible world. Thus, even for those readers of the essay who see Schelling to be arguing that God could have abstained from creation, spiritual existence is necessitated as soon as there is nature. See Thomas Buchheim, 'Freispruch durch Geschichte: Schellings verbesserte Theodizee in Auseinandersetzung mit Leibniz in der Freiheitsschrift, *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 51.4 (2009), pp. 375–377.
152 *SW* I/7: 395; *Freedom*, p. 74.
153 *SW* I/7: 395; *Freedom*, pp. 74–75. Translation modified.
154 Michael Vater, 'Being in centro,' p. 128.
155 *SW* I/7: 350; *Freedom*, p. 24.
156 *SW* I/7: 362; *Freedom*, p. 37.
157 Peter Koslowski, 'Absolute Historicity, Theory of the Becoming Absolute, and the Affect for the Particular in German Idealism and Historism: Introduction' in *The Discovery of Historicity in German Idealism and Historism*, ed. Peter Koslowski (Berlin, Heidelberg, and New York: Springer, 2005), p. 2.

# Part 2

# Hegel

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# 4 Nature as Self-External Reason

By the twenty-first century, it has finally come to be accepted within relatively wide philosophical circles that Hegel had deep knowledge about the natural world, and that his philosophy of nature, even when it 'backed the wrong horse' in the history of scientific theory,[1] is rich in philosophical analyses that could only have been pursued by a philosopher well acquainted with the details of the empirical sciences of his time. But that Hegel is now largely recognised among Anglophone scholars as having impressive knowledge about the empirical sciences does not always translate into an appreciation for the significance of the philosophy of nature for Hegelian metaphysics. On the contrary, one can easily defend Hegel against charges of being ignorant of natural science and still dismiss his philosophy of nature as being irrelevant to his fundamental philosophical project. It is this latter dismissal of Hegel's philosophy of nature—prevalent in what might be described somewhat clumsily as the neo-pragmatist Hegel renaissance—that I want to put into question.[2] On my reading, Hegel is not only knowledgeable about the empirical sciences of his day, but the philosophy of nature is, for Hegel, utterly indispensable for accomplishing the aims of philosophical science. As Beiser puts it, '*Naturphilosophie* belongs to the very heart and soul of Hegel's philosophy.'[3]

Defending this view is difficult for a number of reasons, one of which is the fact that Hegel's enormous influence in other areas of philosophy overshadows his systematic ambitions regarding nature, the effect of which is that he is simply assumed to be, first and foremost, a philosopher of consciousness.[4] The reception of Hegel's *Phenomenology of Spirit* in particular has not only eclipsed the significance of his great work of metaphysics, the *Science of Logic*, but it has made his philosophies of nature and subjective spirit nearly incomprehensible to those exclusively familiar with the *Phenomenology*. This is somewhat ironic, since Hegel's *Phenomenology* was never meant to present his own philosophical perspective, but was intended to clear a path for ordinary thought such

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that it could arrive at the standpoint of philosophical science (absolute knowing) and from that standpoint *begin* the task of philosophy proper, within which nature occupies a central place.[5] It is somewhat unfortunate, then, that when undergraduate students are given the opportunity to study Hegel at all, it is typically his ladder to philosophy and not his speculative philosophy proper to which they are introduced.

Part II of this book aims to show how Hegel's philosophy of nature is indeed central to his philosophical project. I argue that Hegel is not only deeply interested in the being and structure of nature, but that, according to Hegel, it is only through a consideration of nature that we come to understand the ontological specificity of humanity or spirit. For, on Hegel's view, it is only through nature's immanent dialectic that the human spirit can be shown to be a necessary form of existence: human beings exist *because there is nature*, the former being ontologically dependent upon the latter.

In this way, Hegel's conception of the relationship between nature and spirit is extraordinarily close to that of Schelling. For both philosophers, nature is the *primary* (i.e., systematically first) expression of the absolute, or 'reason'—an absolute that simply has no real being *without* its natural manifestation. Moreover, for both philosophers, it is this natural manifestation of reason that makes possible, and necessary, spiritual existence, i.e., reason that has fully come into its own in human consciousness. One of the central aims of the following four chapters is therefore to defend the view that Hegel is, like Schelling, committed to a version of metaphysical idealism in which the objective, impersonal, and finite make possible the more sophisticated ontological determinations associated with subjectivity, personality, and infinite being. Importantly, however, as is the case with Schelling, Hegel conceives of this distinct form of spiritual being as going beyond nature only insofar as it differs from nature in what it *is* and *does*; spirit is not 'natural' but it also does not exist anywhere else but within the natural world.

Critics of Hegel often assume that he simply begins with a philosophical account of spirit or subjectivity and only understands the natural or objective in light of the former. On this reading, Hegel is something of a 'subjective idealist'. But Hegel is adamant that idealism must shed its subjective character and become an *absolute* idealism. Indeed, Hegel's turn to absolute idealism was meant to overcome the subjectivist metaphysical standpoint Hegel understood to characterise pre-Schellingian forms of idealism. Any interpretation of Hegel that begins with the subject—be it empirical or transcendental—is therefore entirely misguided.

But 'subjective idealism'—which was perfected in Fichte's *Wissenschaftslehre*—was not the only form of idealism from which Hegel sought to distinguish his own system. Hegel also took his project to move beyond Schelling's so-called 'objective idealism', and it is this latter

move away from Schelling that has too often been taken at face value by commentators on Hegel who see themselves as sympathetic to his project. When Hegel distinguishes himself from both Fichte and Schelling, we are often told, he is developing a dialectical conception of the relationship between consciousness and the world, a relationship in which neither is given pride of place. Hegel, so the story goes, seeks to overcome these one-sided approaches in philosophy in his *absolute* idealism—an idealism that privileges neither the subject nor the object.

This story is confused for a number of reasons. First, as we have already seen in Chapter 1, it was Schelling who first pointed out the limited standpoint of both 'subjective' and 'objective' idealism and called for an 'absolute idealism' in which reason (or subject-object identity) is understood as the essence of everything that *is*. It is true, however, that Schelling privileges what he calls the '*objective* subject-object',[6] that is, *nature*, as the most basic expression of reason and consequently the starting point for philosophy. In Hegel's mature system, by contrast, one does not begin with nature but with *logic*. Perhaps, then, Hegel was on to something in distinguishing *his* absolute idealism from Schelling's absolute yet no less 'physiocentric' idealism. Below, it will become clear that Hegel's system does not in any way make the philosophy of nature first philosophy. Whereas Schelling typically begins his presentations of the philosophy of nature with minimal (if any) metaphysical preface, Hegel understands the philosophy of nature to be based upon a more fundamental study of reality, namely, logic. Yet this should not be interpreted as a retreat, on Hegel's part, from Schellingianism. For the establishment of logic as metaphysics is not the establishment of some middle-ground between Fichte and Schelling. On the contrary, Hegel's move here takes place within a strictly Schellingian paradigm, yet one that seeks to surpass Schelling methodologically: Hegel aims to show how reason (the identity of subject and object) *logically* entails its own appearance in nature and spirit. Thus, in logic, Hegel begins from the standpoint of the intellectual intuition of subject-object identity or reason *as such*; in the philosophy of nature, he describes how reason appears as *nature*; and in the philosophy of spirit, he describes how reason is fully revealed in *humanity*. Therefore, while Hegel certainly seeks to overcome the one-sidedness of *objective* idealism, this does not distinguish him from Schelling, for whom absolute idealism also requires that one attend to the primordial reality of subject-object identity.[7]

A further reason that it is mistaken to distinguish Hegel from Schelling on these grounds concerns the fact that both philosophers do, in another sense, privilege the objective over the subjective. Above, I recalled that Schelling argues that nature or 'objective subject-object identity' requires philosophical treatment prior to spirit or 'subjective subject-object identity'. When we look to Hegel's system, we see the same general tendency.

Again and again, Hegel is committed to elucidating how those features of reality that are more 'objective' give rise to features of reality that are more 'subjective': in the *Phenomenology*, consciousness *first* seeks the truth of being in the objective world and is only subsequently driven to seek the truth of being in consciousness itself; in the *Science of Logic*, the doctrines of being and essence, which make up the objective logic, precede the doctrine of the concept, the subjective logic; in the *Philosophy of Nature*, the mechanical motion of material objects precedes the activity of organic development and living subjectivity; and, as I will explore in detail in the following four chapters, nature *as such* precedes spirit in *all* of its forms. Indeed, it is only once *spirit* emerges in the system that we begin to see the 'subjective' determinations of being give way to 'objective' determinations, e.g., when the finite or individual subject precedes the objective political community in the philosophy of spirit. But up until Hegel derives the life of subjective spirit from nature, it is the objective element with which Hegel begins in nearly every area of philosophical science. All of this is to say that when we look to the details of the dialectic, Hegel is much more of an 'objective idealist' than he himself acknowledges, if by 'objective idealism' we mean the idealism that seeks to unify subject and object by beginning with an '*objective* subject-object' and demonstrating the emergence of greater and greater forms of subjectivity from this largely objective reality.

Of course, this does not mean that Hegel is any less committed to understanding and even championing human subjectivity as the greatest expression of reason in the world. But Hegel's systematic ontology is characterised at every turn by what I am calling the primacy of the impersonal, the fact that subjective persons only *are* because there exist *non*-personal, non-subjective forms of reality—even *non-living* forms of reality—which constitute the basis of all that is. It is important that this primacy of the impersonal not be taken to exclusively signify Hegel's determination to understand the human spirit in light of its dependence upon nature. Were this the case, then Hegel's philosophy of nature would be grounded upon relatively practical interests; it would make the philosophy of nature into an instrumental programme seeking to demonstrate the necessary existence of spiritual life. But the aims of the philosophy of nature are more far-reaching than this. Hegel, like Plato and Aristotle before him, is concerned with understanding the *being* of nature; and this concern is notionally separable from the fact that, according to Hegel, nature *turns out* to involve organic life and ultimately pave the way for the emergence of humanity. Hegel's immanent method demands that we let go of all our presuppositions—including our desire to philosophically justify a metaphysics of freedom—and simply let nature reveal its being to thought. Indeed, it is only such a method that will allow us to

properly answer the question that has animated the philosophies of nature throughout humanity's global history: what is nature?[8]

Hegel's answer to this question can be stated quite briefly, and it is fundamentally distinct from the answer offered by Schelling. Nature, for Hegel, is the 'Idea' (i.e., reason) in its alienation from itself, the Idea that is outside of itself. What exactly this means, however, is in no way straightforward. In this chapter and the one following it, I aim to clarify Hegel's conception of nature as the 'self-external Idea'. In doing so, I hope to shed some light on the project of Hegel's philosophy of nature. This will allow me to go on to elucidate, in Chapters 6 and 7, the process through which nature gradually develops nascent forms of interiority and finally necessitates the existence of the human spirit.

## The Young Hegel

Hegel's earliest intellectual passions were not in the philosophy of nature or even metaphysics more generally. In his intellectual youth, Hegel was primarily dedicated to interpreting various forms of ethical and religious life and defending a conception of an organic, political-theological community in which the alienation endemic to the modern world would be overcome.[9] But Hegel soon developed a great interest in metaphysics and the study of nature in particular, and in large part this development was thanks to his friendship with Schelling. By 1801, Hegel was fully committed to understanding social-philosophical issues in light of a metaphysical system in which the philosophy of nature plays a fundamental role. In that year, Hegel moved to Jena, briefly living with Schelling. In Jena, he taught courses with Schelling and replaced Fichte as Schelling's co-editor for the short-lived *Critical Journal of Philosophy*.[10] In order to take up the position of *Privatdozent*, Hegel defended twelve 'theses' on his 31st birthday against Schelling (among others), and subsequently submitted his Latin dissertation, *On the Orbits of the Planets*, his first nature-philosophical work.[11]

It is clear even from these brief biographical remarks that, during this period, Hegel's intellectual friendship and collaboration with Schelling intensified in 1801. What is of central importance for us is that, during this period, Hegel followed Schelling's lead in promoting the idea of a philosophy of nature that would not only supplement Fichte's *Wissenschaftslehre*, but transform critical philosophy into a truly all-encompassing system in which the objective, natural world would be presented as the most basic manifestation of the absolute Idea or reason. As I argued in Part I above, Schelling's system of identity directly challenged Fichte's idealism in two interrelated ways: (i) it takes nature to be primary in a significant sense and (ii) this primacy of nature is understood to make possible the development

of a system of absolute, as opposed to merely subject-dependent, identity. It is this topic that occupies Hegel in the first publication to which he attaches his name: *The Difference Between Fichte's and Schelling's Systems of Philosophy*.

According to the young Hegel, Schelling located a profound problem within Fichte's *Wissenschaftslehre*. For the latter aimed at a philosophy of unity in which nature and spirit would be presented as identical, but this identity depended exclusively upon subjective or spiritual activity, i.e., on the activity of the 'I'. In the idealists' even more technical language, Fichte only granted subject-object identity to the s*ubject* (i.e., subjective subject-object identity) and did not extend this subject-object identity to the *object* (i.e., objective subject-object identity). Subjective spirit and objective nature were thus shown to be identical in Fichte's system only insofar as the 'I' *posits* nature as its limit, as the 'not-I'. This act of positing is necessarily one-sided, since the identity of nature and spirit only goes one way: from spirit to nature. To move 'from nature to spirit', then, would make a significant advance upon Fichte's idealism insofar as (i) it would be shown that nature *itself* is intrinsically connected to the subject it generates, namely, as its ontological source; and consequently (ii) the identity that characterises the being of beings would be an *absolute* identity, and not an identity merely relative to subjectivity or consciousness. As Hegel writes, 'In the philosophy of nature Schelling sets the objective subject-object beside the subjective subject-object and presents both as united in something higher than the subject.'[12] In order to reach this higher metaphysical standpoint, the 'subjectivism' of Fichte's idealism would have to be bracketed as a limited standpoint such that nature itself could be shown to determine *itself* as subject-object identity (or an expression of absolute reason). Thus, as Hegel says, 'abstraction from what is subjective in the transcendental intuition is the basic formal character of Schelling's philosophy.'[13]

According to Hegel, the non-subjectivism of Schelling's system was lost on its audience. Hegel believed that Reinhold, for instance, had failed to see the essential difference between Fichte's subjective idealism and Schelling's absolute idealism.[14] The *Difference* essay is therefore meant to clarify this difference between Fichte and Schelling and to defend a generally Schellingian position[15] (despite the fact that even here Hegel already has his own distinct ideas about how such a system of identity ought to be presented).

Following Schelling, Hegel sees Fichte's conception of the 'not-I' to be a poor conception of nature in that it is a conception of something utterly devoid of freedom. 'Nature is something essentially determined and lifeless', Hegel writes of Fichte's view.[16] But even more significant than the fact that Fichte fails to grant nature autonomy is the *reason* for this failure. According to Hegel, Fichte *had* to see nature as unfree, because,

for Fichte, 'nature is simply something that reflection posits for the sake of the explanation, it is a [merely] ideal result.'[17] Thus, on Hegel's view, '[Fichte's] system itself is a consistent product of the intellect … The Subject-Object, therefore, turns itself into a subjective Subject-Object and it does not succeed in suspending this subjectivity and positing itself objectively.'[18] The real and concrete identity of objectivity and subjectivity remains elusive as long as nature is understood as a mere thing lacking all subjective, self-determining spontaneity; and nature will always be understood in this manner if one begins thinking from the perspective of consciousness or the subjective subject-object. The idealist goal, therefore, of discovering an absolute principle of identity can only be achieved by considering the possibility that nature is something *other* than a mere lifeless thing posited by a mind; and to take this possibility seriously requires that one begin thinking from the perspective of non-subjective subject-object identity, i.e., to think *not only* from the perspective of consciousness. Thus, as Sally Sedgwick remarks, Hegel follows Schelling in arguing that we must 'abstract from what is subjective in [Kant's and Fichte's] idealisms', which will allow us to begin thinking from the perspective of subject-object identity as such[19]—i.e., that which makes both nature and spirit possible.

In the *Difference* essay, Hegel is as enthusiastic as Schelling about a magnetic 'indifference point' in which the polarities of subjective spirit and objective nature would be shown to be essentially identical, different 'poles' of the absolute 'magnet', as it were.[20] But Hegel soon abandons this notion of an indifference point, and this becomes a central area of contention between Schelling and Hegel in 1807. The standard interpretation of Hegel's dissatisfaction with this concept of indifference is that it is insufficiently determinate to be genuinely 'absolute'. Indeed, if an *indifferent* absolute lacks determinate *difference*, then this raises the question as to how an undifferentiated absolute becomes determinate without relinquishing its character as absolute or self-sufficient. That is to say, if the absolute essence of everything that exists is sheer indifference, then it seems impossible for that absolute to manifest itself as determinate in natural objects and spiritual subjects that differ from one another in important ways.

This criticism certainly plays a role in Hegel's ultimate rejection of 'indifference' as a name for the absolute, but the issue is by no means as straightforward as the paragraph above suggests.[21] In order to understand the fundamental reason behind Hegel's rejection of Schellingian indifference, we must first note that, at least in the *Difference* essay, Hegel saw the absolute indifference point to be inclusive of and dependent upon *real difference*: 'Philosophy must give the separation into subject and object its due … Hence, the Absolute itself is the identity of identity and non-identity; being opposed and being one are both together in it.'[22] Indifference in the

*Difference* essay is not some abstract being detached from its expression as objective nature and subjective spirit—even if it may seem that way in Schelling's presentation of it. Rather, this 'absolute identity' is necessarily an identity of identity *and* difference.[23]

On my view, since Hegel—already in 1801—recognised that indifference could at least be conceived of as involving a unity of identity and difference, the standard interpretation of Hegel's Schelling-critique is insufficient. When Hegel leaves behind the concept of 'indifference', it cannot be simply because indifference lacks determinacy as 'the night in which all cows are black'. Rather, as Hegel works out his philosophical view in Jena, he comes to see that the magnetic indifference point fails to account for the *becoming*-determinate of the absolute; it is not that 'indifference', for Hegel, is necessarily without determinate difference, but that there is no motor intrinsic to indifference that accounts for its *active differentiation*. In other words, it is the *developmental process* of determination that is lacking in the magnetic identity of 'indifference' and, more specifically, the process that accounts for the movement from nature to spirit. According to the magnetic schema, nature and spirit are distinguished from one another—they each have a 'place' as one pole of indifference—but this determinacy is not shown to emerge. A more accurate account of the nature-spirit relation, for Hegel, will have to describe the process of differentiation whereby the objective (or the objective subject-object) gives rise to the subjective (the subjective subject-object).

As Schelling and Hegel diverge from their respective 1801 presentations of the metaphysics of identity, each develops a more *processual* account of absolute identity. And it is this processual character of identity that allows both Schelling and Hegel to understand nature to necessitate the existence of spirit. As I argued in Part I, Schelling expresses this idea in its clearest form in the *Freedom* essay. Here, in Part II, I argue that Hegel presents his own version of this idea in his 'mature' system.

By Hegel's 'mature' system, I mean to refer to the Hegel of 1812 onwards, i.e., from the publication of the first volume of the *Science of Logic* through his appointments in Heidelberg and Berlin. As Professor of Philosophy at Heidelberg, Hegel published the outline to his system, including the philosophy of nature, in encyclopaedic form in 1817, and he lectured on the philosophy of nature in 1818. In Berlin, Hegel lectured on the philosophy of nature in 1819/20, 1821/22, 1823/24, 1825/26, 1828, and 1830.[24] He published revised versions of his *Encyclopaedia* in 1827 and 1830.

In what follows, I focus primarily on the 1830 *Encyclopaedia*. Although, technically, this means that the Hegel presented here is largely the Hegel of 1830, I am not convinced that his intellectual development from 1812

to 1830 involves any significant changes to his philosophical perspective.[25] Hegel never calls into question his general programme, in which nature is shown to turn more and more inward through a gradual process that leads, finally, to the logical emergence of the human spirit. Indeed, once he arrives at his *Encyclopaedia* system, he remains committed to the same basic philosophical stance and merely seeks to perfect the details of that system until the end of his life, hence the significant continuity between all of Hegel's output from 1812 on. Moreover, it is not entirely insignificant that the 1830 outline of this basic philosophical position was the one Hegel himself understood to be the most perfect outline of his philosophical vision. Whether it could have been further perfected in Hegel's eyes is a matter I will consider in Chapter 5 below.

None of this should suggest that, prior to the publication of the *Logic* and the encyclopaedic presentation of his system, Hegel simply followed Schelling and had nothing unique to say about the philosophy of nature. Even prior to 1807, when Hegel expresses in no uncertain terms his disdain for the metaphysics of indifference, he is already distancing himself from Schelling in significant ways. Indeed, between the *Difference* essay and the *Phenomenology* lies an entire philosophical development in which Hegel attempted to work out his own distinctive system of logic, metaphysics, and reality. This period includes his first works of nature-philosophy, and although Hegel's Jena system is in some respects Schellingian (specifically regarding the technical role played by the 'potencies'), it is also clearly distinct from Schelling's system in its thematisation of logic, on which Hegel was already lecturing in the Winter Semester 1801/02. In fact, it is Hegel's developing interest in logic and its relation to metaphysics that allows him to distinguish himself from Schelling and abandon some of his more Schellingian sympathies evident in 1801. As fascinating as such developments in Hegel's thought are, however, we need not work through them in order to understand his mature system. Unlike the nature-philosophical view Schelling lays out in the *Freedom* essay, which is nearly impossible to comprehend without tracing a development of thought that begins with Schelling's early texts on the philosophy of nature, Hegel's mature *Encyclopaedia* system is intelligible on its own terms.

### From Nature's Powers to its Logical Process

In Part I of this book, I argued that it wasn't until 1809 that Schelling developed his most sophisticated account of the logic of identity. The *Freedom* essay published in that year presents a fully worked out account of nature-spirit identity as necessarily processual, i.e., as an 'identity' in which nature differentiates itself as spirit (albeit atemporally, this being an ahistorical process metaphysics prior to the drafts of the *Ages of the*

*World*). Hegel wanted nothing to do with Schelling's intellectual development after the system of identity and, although recognising 'deep, speculative content' in the *Freedom* essay, he read this work as being exclusively concerned with freedom and thus disconnected from systematic concerns regarding the nature of reality.[26] Significantly, however, Hegel also came to emphasise the view that he and Schelling hit upon in their youth: that the fundamental philosophical connection between nature and spirit concerns that manner in which nature makes possible human existence. In the *Encyclopaedia*, Hegel argues that spirit logically emerges from the immanent dialectic of nature. But central to his mature view is the rejection of the Schellingian language of the potencies (*Potenzen*). Indeed, Hegel is fully committed to a developmental ontology of nature that does away entirely with the idea that the different stages of nature can be understood in terms of any kind of natural powers.

My claim is not that Hegel abandons the language of *Potenzen* completely, but rather that the *Potenzen* no longer play a technical, critical role in the *Encyclopaedia* system. On rare occasions, Hegel does describe features of nature and spirit in terms of potencies, but there is a marked shift away from his earlier, Schellingian utilisation of this term, where reality itself is understood as a self-potentiating system. In the *Encyclopaedia* system, the potencies no longer do the work of differentiating one stage of nature from another. This shift in terminological preference involves Hegel's growing suspicion that a concept taken over from a formalist discipline such as mathematics does insufficient justice to the determinacy of reality. For Hegel, nature's determinacy is better understood as a logical *process* that gradually unfolds from one *moment* to another.

Below, I return to Hegel's idea that logical thought makes possible a philosophical comprehension of ontological determinacy that cannot be achieved with the mathematical language of the potencies. To begin to understand Hegel's novel conception of nature's immanent development, however, it is helpful to note that he not only leaves behind the language of the potencies, but—drawing upon the polysemy of the term—that he also turns against the idea that the fundamental features of nature should be thought to be immanently powerful (*mächtig*), arguing, instead, that nature is essentially *powerless* (*ohnmächtig*).[27] This idea of nature's powerlessness is of the utmost importance for understanding Hegel's unique conception of nature and its immanent development. Not only does Hegel conceive of dialectical movement as being motivated by something other than powers, but nature is the *least* powerful moment in the tripartite system of ontological development that begins with logic and ends with spirit. This means that, for Hegel, spirit does not emerge from nature as a higher power of nature's productivity, but as the outcome of nature's impotence.

Yet without granting nature intrinsic powers for self-transformation, how does Hegel understand spirit to emerge from nature? How can something like human freedom be born of a being that, by definition, lacks power? Surely, one might think, if nature is utterly impotent, then nothing so powerful as human freedom can come of it. But this is to misunderstand Hegel's conception of nature's impotence. As Hegel writes in the *Science of Logic*, nature's impotence determines nature as something that runs wild or goes off course (*sich verlaufen*) into 'blind irrational [*begrifflos*] multiplicity'.[28] This means that claims regarding the 'powerlessness of nature' describe nature's deficiency in the power of *logos*. That is, the powerlessness that makes nature 'go off course' into 'blind irrational multiplicity' is nature's inability to be purely rational or logical: '*This* is the impotence of nature, that it preserves the determinations of the concept only abstractly, and leaves their detailed specification to external determination.'[29]

As the realm of irrationality, nature is lacking in the fully self-determining activity of reason. As a result, nature is brimming with an 'infinite wealth and variety of forms and, what is most irrational, the contingency which enters into the external arrangement of natural things.'[30] The much criticised Hegelian idea of the 'impotence of nature' (*Ohnmacht der Natur*) is thus what determines nature, according to Hegel, as the realm of contingency (*Zufälligkeit*), caprice (*Willkür*), and disorder (*Ordnungslosigkeit*).[31]

It is quite ironic, then, that so many of Hegel's critics have taken him to task for 'forcing' nature into a rational structure, when Hegel's rationalist philosophy of nature emphasises so strongly the *irrationality* and *contingency* at work in the natural world.[32] David Farrell Krell epitomises this criticism of Hegel's philosophy of nature when he says that Hegel's approach, in contradistinction to that of Schelling and Novalis, is to violently compel nature to expose its rational core:

> [According to Hegel's point of view] the underlying problem with Schelling and Novalis is that they are reluctant to lay a hand on nature. For only if one exercises violence on this Proteus … can one force him (or her, inasumuch as Proteus is actually Eve, or Nature) to stand still long enough to exhibit his (or her) logical structures. Only the use of such violence or force (*Gewalt antun*) will enable the philosopher to wrest the truth from nature: only if the philosopher refuses to gaze on nature with the sensuous eyes, only if he diverts her mesmerizing influence with the mirror of philosophical speculation and strikes with the sword of logic, will philosophy prevail.[33]

There is truth to Krell's interpretation: Hegel does disparage the empiricist approach to nature, demanding that philosophy attend to nature through

reason; Hegel does distinguish himself from Schelling and Novalis by conceiving of all rationality in terms of logical development;[34] and Hegel does seek to set aside the *study* of nature's irritational or contingent elements (its 'Protean' character, as Krell—following Hegel—puts it here) as being philosophically insignificant. But there are two related problems with Krell's reading and those like it. First, such an interpretation seems to suggest that reason is, in essence, alien to nature, and that Hegel's philosophy of nature must therefore violently '[strike] with the sword of logic' in order to make any sense of the natural world. Second, because reason, on this interpretation, is taken to be alien to nature, it is assumed that a rationally oriented approach to nature will necessarily ignore what makes nature *nature*, namely, its irrationality and contingency. But it is important to note that one can only interpret the rational approach to nature as violence *against* nature if nature is understood to be lacking *all* rationality—something that Hegel does not believe. Additionally, one might argue—as Hegel does—that there is a rational explanation for the irrationality and contingency that is found in nature. Indeed, Hegel seeks to demonstrate the *rational necessity* of nature's irrational character.

Regarding the first of these two points, it is true that, at times, Hegel himself uses violent imagery to describe the relationship between thought and nature. Take, for instance, the following remark:

> Not until one does violence to Proteus—that is not until one turns one's back on the sensuous appearance of Nature—is he compelled to speak the truth. The inscription of the veil of Isis, 'I am that which was, is, and will be, and my veil no mortal hath lifted', melts away before thought.[35]

But nature-philosophical thought can only appear as violence, it seems to me, from the perspective of 'the understanding', which opposes itself as subjective thought to an objective nature. From the perspective of *reason*—that is, from the perspective that Hegel himself takes to be properly philosophical—nature is nothing other than the irrational expression *of the Idea* (i.e., reason itself), and thus nature is necessarily implicated *in its own unveiling*. Isis melts her own veil, since she is implicitly rational, i.e., reason that is external to itself; moreover, the inscription is *correct* in claiming that no *mortal* can lift the veil of Isis, since the thought that melts it is the impersonal thought of *logos*. Just as with Schelling, so too with Hegel: when we think rationally we are no longer thinking as finite consciousness but as the reason of the world. Here Hegel provides a more telling description of his method in the philosophy of nature:

> Philosophy has, as it were, only to watch how nature itself overcomes its externality, how it takes back what is self-external into the centre

> of the Idea, or causes this centre to show forth in the external, how it liberates the concept concealed in nature from the covering of externality and thereby overcomes external necessity.[36]

Reason is not absolutely foreign to nature, and it is therefore misguided to conceive of the rational comprehension of nature's structure as any sort of violence brought upon nature by thought. Things might look this way from a non-philosophical perspective, but as soon as we begin pursuing a properly philosophical investigation of nature we find that it is nature's own inner being that freely discloses its rational core.

Where Hegel differs from Schelling on this matter concerns the fact that, while he understands nature to be an expression of reason—that is, while he understands reason to be immanent to nature—he also understands nature to be reason in a perverted form. In this respect, nature is indeed irrational for Hegel. But rather than take the irrationality of nature as given, he aims to show how nature is *necessarily* irrational. Hegel therefore offers a rational derivation of the very *irrationality* and *contingency* that so many contemporary philosophers assume define nature's being. If he is successful in this derivation, it will go a long way in explaining why thought encounters a range of difficulties in comprehending nature. But if we are to follow Hegel in this thought, then we will not be able to insist that the difficulty of comprehending nature results from a simple opposition between thought and nature. On the contrary, according to Hegel, it is nature's intrinsic structure that contends *with itself*, for it is, paradoxically, nature's own *logic* that makes it the realm of irrationality. In other words, nature is irrational, on his view, because this is the rationale at work in the *being* of nature itself. Of course, one need not grant Hegel that irrationality and contingency are indeed nature's defining characteristics.[37] But to oppose Hegel's view one must understand nature to be either *absolutely* rational, i.e., lacking all contingency, or only *contingently* irrational, such that nature *could have been* absolutely rational. For Hegel, nature is both brimming with contingencies and lacking in a robust expression of rational self-determination—and this could not have been otherwise.

There is more to say about Hegel's conception of the impotence of nature, but this much should be clear at this stage: for Hegel, nature is necessarily lacking in robust rational determination, and yet it is still, in certain respects, rational. Philosophical science, then, will have to tell us something about *why* nature is irrational and what rationality within nature there nevertheless *is*.

Significantly, both of these points have something to do with Hegel's turn away from the potencies and from Schelling's philosophy of nature more generally. I have already suggested that Hegel's interest in nature's contingency sets him apart from Schelling. But what about the rationality

that Hegel *does* find in nature? Such rationality, for Hegel, should not be understood in terms of potencies structuring the natural world. Instead, Hegel argues, we must understand the various stages of nature as moments in a logical process, that is, a logical process immanent to nature. This is a logical process that is on display in the philosophy of nature, yet it is not a logical process applied *to* nature—violently or otherwise. It is, again, an immanent logical process. In fact, Hegel sees his own philosophy of nature as superior to Schelling's *because* of his own distinctive logical method. Although Schelling claims to be thinking immanently about the being and structure of nature, this is, on Hegel's view, ultimately impossible without explicitly thematising the *logic* of nature. And this is precisely what Hegel seeks to do in the philosophy of nature. For instance, when we are considering the nature of space, it becomes clear that the logical structure of space necessitates a further logical structure, namely, that of time, and this logical explication is immanent, for Hegel, precisely because it is the explication of logical content (the structure of time) that is implicit in the logical structure of the previous determination (space).

From a Hegelian perspective, however far Schelling goes in developing a speculative philosophy of nature, it is never properly immanent on account of the fact that it lacks such a consideration of the logical connections between the stages of nature. If philosophical thought is to be properly immanent to nature itself, then this thinking must be pursued through nature's logic. Again, this does not mean that Hegel 'forces' nature into a logical framework, but rather that he insists that philosophy come to terms with the logic intrinsic to nature—a logic that makes nature the mostly, but not entirely, irrational being that it is.

It is important to emphasise here that Hegel does not understand Schelling's system to be entirely lacking in rationality. Indeed, according to Hegel, Schelling not only understands the absolute to be reason itself (A = A), but he also rightly insists upon describing the rational connections at work in the entire nature-spirit system. In these ways, Schelling and Hegel are equally committed to the task of presenting the rationally necessary structures of nature and spirit. Where Schelling doesn't go far enough, according to Hegel, is in explicating the dialectical manner in which this rational necessity proceeds. Thus, although Schelling 'introduced forms of reason, and applied them [to nature] in place of the categories of the understanding' he did not show how these forms of reason (i.e., the rational structures in the natural world) are logically entailed by one another.[38] 'The logical point of view was what Schelling never arrived at in his presentation of things,'[39] and *this*, Hegel claims 'is the great difficulty in the philosophy of Schelling.'[40] By failing to consider the *logic* of nature's rational structure, Schelling did not rise far enough to the heights of fully self-transparent reason. As a result, Schelling's system of nature remains,

according to Hegel, esoteric and, while disclosive of important rational truths, it fails to present such truths in fully rational *form*—logic being the paragon of rationality for Hegel.[41]

According to Hegel, the esotericism of Schelling's philosophy is on full display when the latter fails to offer ordinary consciousness, i.e., non-philosophical ways of thinking, a pathway *into* the philosophy of nature, which begins with the immediacy of intellectual intuition. To be sure, 'the untutored mind may be filled with admiration and astonishment' when presented with a system that identifies formal similarities between various features of nature.[42] Ordinary consciousness may even 'venerate in it the profound work of genius'.[43] But there is no sense in which the movement of 'potentiation' can be fully explicated to ordinary consciousness—hence the attribution of 'genius' to the philosopher who constructs a formal system that appears to unify disparate elements of reality. Thus, when Schelling states that 'those who do not have intellectual intuition cannot understand what is said of it, and for this reason it cannot be communicated to them,'[44] Hegel sees this as a refusal to clear a path for those uninitiated in the philosophy of nature or speculative philosophy more generally. The method of 'depotentiation' briefly discussed in Chapter 1 does not provide an answer to these concerns, for the Hegelian still would like to know: how does one in fact go about abstracting from consciousness in order to sink into the depths of nature? What must one do in order to descend the potencies and arrive at an intuition of sheer reason? Hegel's own answer to this question takes us beyond the scope of the philosophy of nature proper and into phenomenology, which is meant to show non-philosophical consciousness that the ordinary way of thinking about things implicitly contains within it the insight that thought and being are identical. By failing to provide such a pathway, Schelling fails to rationally justify the standpoint of philosophy to the non-philosophical standpoint, despite the fact that the standpoint of philosophy is indeed the standpoint of reason (A = A, subject-object identity, or the identity of thought and being).

Even if we begin from the standpoint of reason, however, and set entirely to the side the importance of providing non-philosophical consciousness with a pathway to that standpoint, Schellingianism continues to appear esoteric to Hegel. And that is because he does not believe Schelling presents the development of reason according to a truly immanent method, which, according to Hegel, must be a dialectical-logical method. Hegel's move from conceiving of reality as a series of powers to attending to nature's logical process therefore plays a fundamental role in distinguishing him from Schelling. Logic is, on Hegel's view, the only immanent way to philosophise about nature, since it is only with logic that thought can sink into the being of nature and show how nature's rational structure unfolds as a necessary progression. Schelling's system of powers, therefore, lacks

immanence, in part, because it is not presented as a logical development of nature.

There is a further sense in which Schellingian nature-philosophy appears to Hegel to fail the test of methodological immanence, and this brings us from his critique of Schelling's esotericism to his critique of Schelling's formalism. If we focus not upon the logic that is *lacking* in Schelling's philosophy, but upon Schelling's utilisation of algebraic symbols, we can understand a second sense in which Hegel's turn to the immanent movement of logic is meant to outstrip the apparently formalist tendencies of Schelling's philosophy of nature. According to Hegel, the idea that nature's fundamental being could be grasped in algebraic presentation and, moreover, as a process of exponential growth, implies that nature is only quantitatively differentiated, i.e., that it does not involve determinate, qualitative differences, such as that between light and life. Not only does Schelling lack a logical conception of nature's rational structure, then, but he imports into philosophical science an especially ill-equipped set of symbols in order to elucidate nature's rational structure, since nature involves not only quantitative but also qualitative determinacy. Thus, from a Hegelian perspective, Schelling's philosophy of powers is insufficiently determinate thanks to its algebraic origins.[45] In Schelling's philosophy, the determinate content of nature—i.e., the logically necessary connections between each of nature's stages—is ignored in favour of mathematical representations of those connections, such as the representation of light as '$A^2$' and life as '$A^3$'. And on Hegel's view, this problematically suggests that the difference between phenomena like light and life can be grasped as a merely quantitative difference, that it is simply a question of how much 'A' there is in the one and in the other. Moreover, these representations are taken over from a theoretical domain with its own metaphysical presuppositions. Thus Schelling's utilisation of algebraic symbols only serves to further dissociate his system from a truly immanent form of philosophy.[46]

As I understand Hegel, this criticism is aimed at a *tendency* in Schelling's thought that finds its most extreme proponents among some of his followers. This is why, whenever he criticises Schellingian formalism, Hegel is sure to distinguish *Schelling*'s philosophy of nature—which in fact 'made progress' with the conceptual employment of the potencies despite its slippage in a formalist direction—from the work produced by Schellingians, such as Lorenz Oken, who go 'almost mad' in their 'miserable formalism' and use of 'superficial analogy'.[47] For this reason, it is important to distinguish Hegel's critique of Schelling's esotericism—which is undoubtedly aimed at Schelling himself—from Hegel's critique of Schellingian formalism. Regarding the latter, Hegel's main insight is that importing any schema into the philosophy of nature—be it exponentiation from mathematics or the magnetic line from physics—is to conceive of

nature in terms of a formal structure that differs from its actual rational content, i.e., its immanent logic.[48] Taking heed of nature's immanent logic is the only way, according to Hegel, to ensure that the philosophy of nature remains rich in content and presents us with the determinate differences between nature's stages.[49]

So much for methodological differences between Schelling and Hegel. Hegel's turn to nature's logical process also leads to distinctive ontological differences between the philosophers' systems of nature. To see this, it is necessary to consider in more detail why Hegel thinks his own logical method can guarantee the kind of qualitative determinacy that appears to be lacking in philosophies of nature in which nature is presented as a *potentiation* of rational stages culminating in the emergence of spiritual potencies. For Hegel, qualitative determinacy always requires negation,[50] a principle that is given succinct expression in the history of philosophy by Spinoza, for whom *omnis determinatio est negatio*.[51] Insofar as any given moment within Hegel's system is determinate (and is not absolute in itself), that moment is characterised by a certain *negative* being; being determinate means *not* being everything *else*, and this *not-being* must be conceived of as an active *negation* of being.[52] It follows from this that, if nature constitutes a process that includes real differences and, at its apex, the ontologically distinctive determination of *spirit*, then nature must be characterised by an activity of *negation*. We can now look back to Schelling's conception of nature's development and see that such negation is entirely lacking in Schelling's conception of potentiation. At work in Schelling's logic of emergence is a *creative* activity which, unlike sublation (*Aufhebung*), does not result from an active *negation* of being.[53]

As I suggested above, Hegel's understanding of nature's development as something other than a process of potentiation is in part an attempt to see how nature's development *necessarily* involves qualitative difference. Now we learn that, for Hegel, qualitative difference is propelled by negation. Against the Parmendeanism of Schelling's philosophy of nature, Hegel argues that being—and thus the being of nature—must necessarily involve *non*-being. With this, we have finally hit upon a fundamental difference between Schelling's and Hegel's conceptions of nature's being and structure. Each philosopher insists upon the ontological determinacy of nature, determinacy that does not only make nature full of qualitative diversity but also makes possible the ontologically distinct realm of spiritual freedom through nature's self-driven development. For Hegel, however, this process of nature's development is fundamentally distinct from the one we find in any of Schelling's texts. In order to clarify this difference, we can once again consider Hegel's conception of nature as 'impotent'.

I have already argued that when Hegel describes nature as impotent, he does not intend to strip nature of any ontological 'weight'. Rather, Hegel

is making a technical point about the *being* of nature, namely, that nature lacks the full force of rationality in such a manner as to be rife with contingency. But there is another sense in which nature is powerless regarding rationality, for Hegel, and that is insofar as self-determining reason (or the absolute Idea) is, at its highest stage, characterised by *freedom*. As we will see throughout the remainder of Part II of this book, nature can also be said to be *powerless*, for Hegel, because freedom is lacking in the fundamental stages of nature; it is only with the emergence of *spirit* that freedom is expressed in its full reality.[54] Since nature is powerless in *this* sense, it would be a mistake to understand Hegel's dismissal of the language of potencies as signalling a rejection of the idea that nature is immanently active and, indeed, 'generative' in some sense of the spiritual freedom that follows it in the system. Hegel does not understand nature to be the efficient *cause* of spirit, but there is an important sense in which nature's impotence is precisely the feature of nature which makes spirit *be*. As should now be clear, the key to understanding nature's impotence, for Hegel, is that the development of nature is one that gets underway through nature's intrinsic *negativity*. Nature is not, therefore, a system of powers that raises itself to the heights of spiritual freedom through an impersonal and unconscious will, as it is for the Schelling of the *Freedom* essay and *Ages of the World*; and yet nature *does* raise itself beyond its unfree, inorganic existence. For Hegel, this process is possible thanks to nature's intrinsic negativity.

Thus, while Schelling and Hegel agree that the being of nature is what makes possible, and necessary, the existence of humanity, they fundamentally differ with respect to explaining *why this is*. And this is precisely where Hegel's turn from nature's powers to its immanent logical process makes all the difference. Whereas for Schelling spirit 'bursts forth' from nature as the highest potentiation of reason, for Hegel nature is reason in its *negativity*, a negativity that *negates* its own negative character in the logical emergence of spirit (the self-negating negativity that is human freedom). The Schellingian and Hegelian logics of emergence therefore provide very different accounts of the development from nature to spirit, and this is precisely because the former conceives of the development of nature in terms of *self-intensification* while the latter conceives of the same development in terms of *self-negating negativity*. It is therefore not enough to say that Hegel, unlike Schelling, focuses on the logical process at work in nature, or even that Hegel's dialectical logic gets underway thanks to the immanent activity of 'negativity' in logical explication. The 'negativity' at work in Hegel's conception of being, and particularly in *nature*, is not only central to the methodological question as to *how* Hegel presents his system; it is essential to the *ontological* status Hegel grants nature and, consequently, how he understands the ontological relationship between nature and spirit.

These remarks are simply meant to highlight an essential difference between Schelling and Hegel, a difference that will not become entirely clear until we have worked through significant parts of Hegel's philosophy of nature. For we have yet to see how nature might be the 'negative' of reason or how spirit 'negates' this negativity. Throughout the remainder of this chapter and the following three, I aim to clarify these ideas.

**An Ontology of Movement**

It should be clear from the preceding that even though Hegel leaves behind the language of the potencies in his *Encyclopaedia* system, he does not by any means depart from the more fundamental Schellingian commitments championed in the *Difference* essay, namely, that absolute idealism must present the series of nature's immanent and necessary determinations as graduated expressions of reason. Critics of Hegel who see in his system a privileging of the conceptual realm and disregard for reality are therefore entirely confused about the manner in which Hegel remains committed to a rationalist, realist ontology throughout his intellectual development. The confusion, I believe, stems in large part from a misidentification of Hegel's newfound *logical* method with some form of anti-realism, logic being taken to signify determinations of the mind that are only superficially related to the world.

Significantly, the later Schelling was one such critic of Hegel's system. In his Munich lectures *On the History of Modern Philosophy*, he derides Hegel's system for being bound up in 'mere thought'. In these lectures, Schelling describes the beginning of Hegel's logic as being propelled by a 'thinking' that is ordinarily accustomed to something more concrete than the abstract *thought* of being:

> The fact that [Hegel] nevertheless attributes an immanent movement to pure being means no more, then, than that the *thought* which begins with pure being feels it is impossible for it to stop at this most abstract and most empty thing of all, which Hegel himself declares is pure being. The compulsion to move on from this has its basis only in the fact that thought is already used to a more concrete being, a being more full of content, and thus cannot be satisfied with that meager diet of pure being in which only content in the abstract but no determinate content is thought.[55]

On this reading of Hegel's *Logic*, we make our way from one logical determination to another thanks to the restlessness of thought, which is in need of something other than it to make sense of things. In this way, the very activity of the dialectic is divorced from—yet seeks to return to—real being.

According to the late Schelling, Hegel never acknowledges this implicit principle of his logical philosophy. Thus, Hegel deceives himself and his audience about a logical concept that 'moves itself'. Underlying the 'supposedly necessary movement' of logic, however, is the fact that 'the concept for its part would lie completely immobile if it were not the concept of a thinking *subject*, i.e., if it were not thought (*Gedanke*).'[56] The implication, in other words, is that the dialectic of being *would not be* were there no subjects to think it. In this way, the late Schelling argues, 'thought'—*rather* than being—'is the animating principle of this movement' in Hegel's system[57]—a system that leaves out the movement of what *is* as such.

As I will argue in Chapter 8, there lies within the late Schelling's interpretation of Hegelian movement a profound critique of Hegel's particular form of emergentism. As we have considered it thus far, however, Schelling's critique is fundamentally misguided and, unfortunately, it has been repeated in one way or another throughout the reception of Hegel's thought in the nineteenth, twentieth, and twenty-first centuries.[58] It is assumed, according to these critics, that when Hegel insists that '[philosophical] science exists solely in the self-movement of the concept',[59] that this movement is separate from the movement of *being itself*. But this is precisely the assumption of modern philosophy that Hegel's logical method was meant to overcome. In order to call into question the presuppositions of modernity, Hegel draws inspiration from the Greeks' 'higher conception of thinking':

> This metaphysics believed that thinking (and its determinations) is not anything alien to the object, but rather is its essential nature, or that *things* and the *thinking* of them [*die* Dinge *und das* Denken *derselben*]—our language too expresses their kinship—are explicitly in full agreement, thinking in its immanent determinations and the true nature of things forming one and the same content.[60]

Hegel's own *Logic*, therefore, is meant to return to this ancient manner of thinking. 'Thus *logic* coincides with *metaphysics*, with the science of *things* grasped in *thoughts* that used to be taken to express the *essentialities of the things*.'[61]

The critics of Hegel who see his logic as being wrapped up in 'mere thought' and thereby detached from being *as such* have therefore entirely missed out on the uniqueness of Hegelian logic. For Hegel's logic is a logic *of being*; it is a content-rich ontology. And while Schelling rightly perceives that Hegel's system is a system of movement, this movement does not have its source in the restlessness of thought and a subjective familiarity with worldly concreteness. On the contrary, Hegel's system is an ontology of movement, because, according to Hegel, being is a *process*

that explicates its moments according to its own immanent, rational necessity. The movement of thought as articulated in the *Logic* is thus the presentation of the movement of being as such, the dialectical process whereby the fundamental determinations of *what is* show themselves to necessitate one another in a conceptually—and therefore ontologically—necessary progression. Being, in other words, just *is* a rational process that unfolds 'dialectically' in logic. If it were possible for there to be a world without humanity—it isn't possible, but if it were—being as such would still be a dialectical process.[62]

Hegel's *Science of Logic* is therefore meant to present the fundamental determinations of being through an immanent explication of its rational structure. It is only through this logical movement that we come to learn, at the end of the *Logic*, that being does not, in fact, 'have' a rational structure, but that it is nothing less than self-determining reason itself, what Hegel calls 'the absolute Idea'. But Hegel's system does not end here, with the concluding chapter of the *Logic*. For logic only comprises the first part of Hegel's tripartite system. The latter two parts are the philosophies of nature and spirit, which together constitute the 'real' counterpart to the 'ideal' logic. This distinction between the 'ideal' and the 'real' parts of Hegel's system is perhaps one reason why critics have taken Hegel's *Logic* to be about something 'detached' from actual being, a system of 'mere thought' and not a system of being itself. But never in German idealist philosophy does the term 'ideal' signify a lack of *actuality* (Wirklichkeit). Something else, therefore, must be at work in the distinction between ideal logic, on the one hand, and *Realphilosophie*, on the other.

The difference between the ideal and real is better understood as a difference of degree, and more specifically, degree of ontological determinacy. Logic, for its part, unpacks the more *abstract* features of being, while the philosophies of nature and spirit unpack the more *concrete* features of being. In other words, the *Logic* presents the necessary determinations of being in abstraction from the reality in which those determinations are found. Logic is therefore ontology, but not an ontology of the most concrete forms of being; it is an ontology of the 'bare essentials'.[63] What makes Hegel's system unique, however, is not that it contains an account of the 'bare essentials' of being, but that the system begins with this abstract logic and only accumulates concreteness through an immanent, dialectical development of those 'bare essentials'. This is why the ontological determinations found in the logic are not, from a methodological perspective, abstracted away from concrete reality; on the contrary, reality—in all its concreteness—is shown to be the logical consequence of pure reason.

The systematic transition from logic to the philosophy of nature is meant to capture the logical necessity that brings us from the abstract ontology of the *Logic* to the concrete ontology of the *Realphilosophie*.

It is without a doubt one of the most difficult and frustrating transitions in Hegel's system for both critics and proponents of his thought. With respect to critics such as the late Schelling, Feuerbach, and Marx, it is this transition which signals that Hegel's philosophy of nature is doomed from the start. For if the transition from logic to nature fails, then it appears as though that which follows the transition—the philosophy of nature proper—cannot get off the ground. In the following section, therefore, I aim to provide an answer to the sceptical, Schellingian question raised by Feuerbach: 'wherein lies the necessity or the ground for this transition [from logic to nature]?'[64]

**From Reason to Nature**

The transition from logic to nature seeks to account for what nature *is* and *why* that is so. This is how Hegel describes nature in § 247 of the Introduction to the *Encyclopaedia* Philosophy of Nature:

> Nature has presented itself as the Idea in the form of *otherness*. Since therefore the Idea is the negative of itself, or is *external to itself*, Nature is not merely external in relation to this Idea […] the truth is rather that *externality* constitutes the specific character in which Nature, as Nature, exists.[65]

In the notoriously challenging transition from logic to nature, reason (i.e., the Idea) 'lets go' of or 'releases' (*entläßt*) its abstractness and thereby lets itself go *into* concreteness. We have already seen one sense in which this is the case, namely, insofar as nature is 'irrational' and rife with contingency. Nature is, for Hegel, a form of being that is defined by *otherness* with respect to reason. But, for reasons that will be explored below, the significance of this transition is misunderstood if it is interpreted as a transition from reason to an utterly irrational nature. For, as the passage above suggests, nature is in no straightforward sense the *other* of reason. Nature, rather, is reason *itself* in its 'self-external being' (*Außersichsein*).

The first thing that must be kept in mind in beginning to unpack the transition from logic to nature is that we are not dealing with a historical occurrence, as if reason 'became' nature *in time*. We must rule this out for the simple reason that the transitions in Hegel's system describe *logical* transitions. To be sure, some of the transitions in his system are themselves reflected in history. In his remarks throughout the *Logic*, Hegel often points out the correspondence between concepts as they emerge dialectically and their appearance in the history of philosophy. But it is only in the philosophies of objective and absolute spirit that history comes to play a central role in the dialectic itself. Indeed, even the dialectic we find

within the philosophy of nature is unrelated to history—a point discussed in detail in Chapter 8. What is more, Hegel argues that a spatiotemporal world (i.e., nature) cannot have an origin in time, which might be implied by a historical interpretation of the Idea's free release into nature.[66]

The transition from the Idea to nature is not, therefore, an actual, historical event. There is good reason, however, for one to *represent* the passage from logic to nature in this manner. While such representational thinking is not philosophical, set in the right context it can nonetheless help to paint a picture of what is in truth a logical or structural feature of being, namely, the atemporal accumulation of concreteness. The type of thought that does this kind of image-thinking best, according to Hegel, is religion, and Hegel himself relies heavily upon theological language in order to flesh out the conceptual transition from logic to nature. The following passage, for example, is meant to explain why the absolute Idea must develop into both nature and spirit:

> If God is all self-sufficient and lacks nothing, why does He disclose Himself in a sheer Other of Himself? The divine Idea is just this: to disclose itself, to posit this Other outside itself and to take it back again into itself, in order to be subjectivity and Spirit […] God, therefore, in determining Himself, remains equal to Himself; each of these moments is itself the whole Idea and must be posited as the divine totality.[67]

Throughout the *Encyclopaedia*, Hegel describes the relationship between logic, nature, and spirit in terms of this divine, processual totality. The Christian God is truly divine only insofar as he is triune, and Hegel understands the Trinity as a process of God's self-externalisation (*Entäußerung*) and return-to-self. In both of these moments, *revelation* is inseparable from God's being. Indeed, Hegel goes so far as to say that 'revelation, manifestation is itself [the Christian religion's] character and content.'[68]

Insofar as the Holy Trinity corresponds to the three parts of Hegel's system, his interpretation of the relationship between God and creation sheds light on his conception of the relationship between logic and nature. God is, according to Hegel, utterly self-sufficient, and yet he must *necessarily* create a world; indeed, God cannot *be* the truly divine being he is unless he 'empties himself out' into existence and subsequently returns to himself in the life of the Christian community (the Holy Spirit). That God is only truly divine insofar as he *differs* from himself in creation is the central 'paradox' of the Trinity, for Hegel. But this idea only remains paradoxical if one presupposes that an *absolutely* free and self-sufficient being should remain shut up within itself, 'absolute' in distinction from anything 'other'. Such a presupposition leads both religious and philosophical

consciousness astray. For if God remained within himself and never revealed himself (*as* a world and *in* the world), then God would lack truly infinite being. Indeed, the true infinite for Hegel is not an infinite above and beyond the finite, but the ontological *process* in which finitude comes to be united with its other and in so doing achieves unbounded (and yet fully differentiated) presence-to-self.[69]

Thus, according to Hegel, the absolute cannot be truly absolute unless it lets itself go into otherness. This is the philosophical truth behind the image of God's *Entäußerung*: reason necessarily makes itself manifest in a world. 'The divine Idea *is just this*: to disclose itself.'[70] Note, however, that this initial moment of revelation or disclosure is one in which God reveals himself as *other* than himself. 'God is *only* manifest as one who particularizes himself and becomes objective, *initially in the mode of finitude*.'[71] Prior to becoming fully divine in the life of the Holy Spirit, God creates a world and does not remain outside this creation but becomes creaturely himself, most perfectly in the person of Jesus.[72] That God *initially* reveals himself in the mode of finitude is significant, for this corresponds, in the conceptual realm, to the externalisation of the Idea as *nature*, i.e., as an *irrational* and *intrinsically limited* manifestation of reason.

Now, for Hegel, the theological narratives of genesis, incarnation, and resurrection are representational and, as such, do not correspond to actual historical events. Rather, such images tell a story that intimates what is going on within the rational *structure* of being. Thus, the manifestation of the Idea does not 'take place', but is instead an eternal 'occurrence' or, more precisely, an atemporal *feature* of being: the Idea must be *manifest*, *finite*, and *carnal* in order for it to be the truly absolute being that it is. The Idea does not, therefore, *become* natural in any historical sense, but the Idea is logically required to *be* nature. Just as God *necessarily* reveals himself through an act of creation, so too the absolute Idea must *necessarily* present itself in the form of *otherness*. This does not simply mean that there must be a natural world, but that the Idea *itself* must manifest itself *as* nature.[73] As Hegel says, nature is 'the *Idea* as *being*,' 'the Idea that *is*'.[74]

The pantheistic necessity at work in the transition from logic to nature should not, however, be taken to signify any lack of freedom on the part of the Idea. For just as God's *Entäußerung* is a *free* act, 'the Idea *freely releases* itself in its absolute self-assurance and inner poise' into 'the externality of space and time'.[75] Indeed, the necessity at the heart of the Idea's manifestation is owed entirely to the freedom and 'resolve' (*Entschluß*) of the absolute Idea to 'release' or 'discharge' itself.

Few readers of Hegel have been enthusiastic about his conception of the Idea's 'inner resolve' to 'freely release itself' into nature. For his part, the late Schelling found these passages in Hegel's *Logic* ambiguous at best. In

the Munich lectures *On the History of Modern Philosophy*, Schelling asks how we should understand the transition from logic to nature in Hegel's system:

> 'The Idea', says Hegel … the Idea in the infinite freedom, in the 'truth of itself, *resolves* to release itself as nature, or in the form of being-other, from itself'. This expression 'release'—the Idea releases nature—is one of the strangest, most ambiguous and thus also timid expressions behind which this philosophy retreats at difficult points. Jacob Böhme says: divine freedom vomits itself into nature. Hegel says: divine freedom releases nature. What is one to think in this notion of releasing?[76]

In his later Berlin lectures Schelling continues his critique:

> [Hegel] helps himself to such expressions—for example, the idea *resolves* itself; nature is a *fall* from the idea—that either say nothing, or … should be *explanatory* and thus include something real, an actual process, a happening.[77]

According to the late Schelling, there are two ways of understanding notions such as the 'free release of the Idea': either they describe nothing at all and are, therefore, philosophically insignificant; or they explain the real, historical event of genesis, such that the idea *actually* releases itself into the exteriority of space and time—or what is the same thing, a transcendent God literally empties himself out into the world in a historical act of creation. Thus, on Schelling's view, the category of 'free release' should describe an actual, historical creation if it is to explain anything at all. And since the 'free release' of the Idea is absolutely *not* a historical event for Hegel, Schelling tells us that this 'astounding category of the release' can be nothing other than a 'figurative expression.'[78]

I will return to the late Schelling's critique of Hegel in Chapter 8. At this stage, his remarks simply help to bring into focus the hermeneutic challenge posed by the 'free release' of the Idea into nature. While it is perfectly acceptable, from a Hegelian perspective, to represent the transition to nature figuratively—e.g., in the language of religion—*philosophy proper* must elucidate this transition in a strictly logical fashion. Thus, if the 'free release' of the Idea is, indeed, a *philosophical* description, then, for Hegel, it describes a *logical transition*, and *not* a historical event. But how might the 'free release' of the Idea be interpreted logically? What might this phrase describe if it is neither a figurative expression nor a historical narration? In order to answer these questions, it is necessary to first consider the general nature of logical transitions in the *Science of Logic*.

### The Logic of the 'Free Release'

Hegel's *Logic* is divided into three major sections: the Doctrines of Being, Essence, and the Concept. Each of these parts of logic is characterised by a certain *type* of logical movement. In the Doctrine of Being, a selfsame category passes over into another selfsame category, each of which has the character of immediate presence-to-self, and it is this sheer immediacy of being that forces the slippage from one category to the other. In the Doctrine of Essence, logical determinations are immanently entangled with others, and thus one determination only ever is what it is in its relation to its other. In the Doctrine of the Concept, the dialectic is characterised by autonomous self-development, such that the immediacy of being that was lost in the Doctrine of Essence is regained, but now *through* the reflexive moment of difference and relationality that characterised the logic of essence. This means that conceptual movement—in the narrow sense pertaining to the Doctrine of the Concept—is the kind of movement in which a logical term develops itself as *different* from itself and in doing so remains what it is. All of this is extremely schematic and is only meant to be an overview of the major transition-types in Hegel's *Logic*, where Hegel tells us that in the 'free release' of the Idea '*no transition* [Übergang] *takes place*'.[79]

As stated above, Hegel does not conceive of the 'release' of the Idea into nature as a *historical* transition—just as the transitions *within* the *Logic* do not amount to historical transitions. His remark that 'no transition takes place', therefore, is not making *this* point about the ahistorical nature of the transition. Some commentators argue that, because Hegel claims that 'no transition takes place' here, the 'free release' of the Idea is not, properly speaking, a logical development.[80] But it is not necessarily the case that, although 'no transition takes place' in the 'free release', Hegel is no longer pursuing his dialectical logic. On the contrary, the 'non-transition' from logic to nature may very well still be a logical development.

W.T. Stace interprets this remark about there being no transition as indicative of the logical *novelty* of the transition from logic to nature. Although he dismisses the language of 'free release' as merely figurative and therefore not explanatory, he suggests that 'possibly Hegel means that the transition from the Idea to nature is a fourth kind of logical deduction.'[81] On this view, the transition to nature is a further *type* of transition, one that is structurally distinct from any of the three fundamental transition-types in the *Logic*, and yet it is also distinct from what Stace takes to be Hegel's inappropriate use of figurative language such as the Idea's 'inner resolve' to 'release itself' into nature. In this way, whatever logical movement is *represented* by the figurative expression of the Idea's 'release', it is absolutely irreducible to anything that comes before it in the *Logic*.

Stace is right to draw attention to the logical novelty that Hegel thinks is at work in the transition to nature, but I believe he both overstates this novelty and too readily dismisses the language of the 'free release' as figurative. On my reading, the logical transition to nature is not an *entirely* new kind of logical transition, nor does an understanding of this transition need to set aside the language of freedom. The key to the transition is to be found, I believe, in Hegel's claim that, in the transition to nature, 'no transition takes place'. Here, Hegel is not saying that no transition whatsoever is at work; rather, he is making the more restricted claim about the *type* of transition that this is *not*. The Idea neither becomes its absolute *other* (as it might according to the logic of being) nor does it *ground* nature in such a way as to allow it, i.e., the Idea, to become a ground (as it might according to the logic of essence). Instead, the Idea freely releases itself into exteriority, because the Idea moves in a *self-developmental* manner, the type of movement exemplified in the logic of the concept. Hegel's point, then, is that the Idea's movement *into* nature should be understood as a movement *within the Idea itself*, as a fully autonomous development of the concept.

Here is the relevant passage in full:

> The Idea, namely, in positing itself as absolute *unity* of the pure concept and its reality and thus contracting itself into the immediacy of *being*, is the *totality* in this form — *nature*. But this determination is not something that *has become*, it is not a *transition*, as when above, the subjective concept in its totality *becomes objectivity*, and the *subjective end becomes life*. On the contrary, the pure Idea in which the determinateness or reality of the concept is itself raised into concept, is an absolute *liberation* for which there is no longer any immediate determination that is not equally *posited* and itself concept; in this freedom, therefore, no transition takes place; the simple being to which the Idea determines itself remains perfectly transparent to it and is the concept that, in its determination, abides with itself. The transition is therefore to be understood here rather in this manner, that the Idea *freely releases* itself in its absolute self-assurance and inner poise.[82]

As Staces notes, this non-transitional 'release' is still meant to be a transition of some kind; that is clear from the final sentence of the passage just cited. But Hegel is not identifying an entirely new form of logical transition; instead, he is differentiating the logical movement of the Idea from the more *abstract* forms of logical movement that are found in the earlier parts of the *Logic*: the transitions characteristic of the Doctrines of Being and Essence. This is why Hegel insists that 'there is no longer any *immediate* determination [i.e., being] which is not equally *posited* [i.e., by something essential] and itself *concept*.'[83] For the movement characteristic of the

concept is the *unity* of the immediacy of being and the mediation of essence. This interpretation also makes it clear why Hegel consistently describes the Idea's manifestation as nature in terms of freedom or 'absolute liberation' (*absolute Befreiung*). For the conceptual structure that *freely moves itself*—and, indeed, *lets go* of its selfsameness—is that described in the third and final part of the *Logic*. Thus, in the *Encyclopaedia* Logic, Hegel can describe the movement of the 'free release' as conceptual movement *in contradistinction* to the movement of mere being and the movement of essence:

> The absolute *freedom* of the Idea, however, is that it does not merely *pass over* into *life*, nor that it lets life *shine* within itself as finite cognition, but that, in the absolute truth of itself, it *resolves to release out of itself* into freedom the moment of its particularity.[84]

We should ignore Hegel's replacement of 'nature' here with 'life'. The significant point is that the Idea's movement into nature is nothing other than the movement of the concept, in which the immediacy of being and its mediated positing by essence are united in fully self-developmental, *autonomous* movement.

And yet, it would be strange if the free release of the Idea were simply more of the same conceptual development that Hegel has already described throughout the Doctrine of the Concept. By the end of the *Logic*, Hegel has already worked through an astoundingly complicated dialectic of the concept's self-development, from the concept proper, to judgement, syllogism, and so on. How can I claim, then, that the Idea's free release is simply the movement of the concept and nothing further? If the transition from logic to nature is nothing but conceptual self-determination, why would this development close the *Logic* and lead to a philosophy of *nature* as a distinct branch of philosophical science? Why, in other words, would the self-determination of the concept now suddenly require a *Realphilosophie*?

To complicate matters further, in the very passage from the greater *Logic* cited above, Hegel distinguishes the 'free release' of the Idea from the logical movement found earlier *in the Doctrine of the Concept*: 'This determination [of the release] is not something that has become, it is not a transition, as when above, the subjective concept in its totality becomes objectivity, or the subjective end becomes life.'[85] Since these transitions to objectivity and to life take place in the third part of the *Logic*, it is curious that I would now identify the transition from logic to nature as nothing more than a conceptual transition in the technical sense.

But it is in fact with this very claim of Hegel's that, I believe, everything comes together. Indeed, it is here that we can begin to see why Hegel takes the transition from the Idea to nature to be driven by strict,

logical necessity. In order to see this, we must consider how the following two claims of Hegel's might fit together: (i) the 'free release' is a *self-developmental* movement, a manifestation of the Idea as *self-determining*; and (ii) this 'free release' is *unlike* the transitions of *becoming* at work *in the Doctrine of the Concept*. What I want to suggest is that, up to the point when the Idea determines itself as *nature*, i.e., as manifest *reality*, it is not in fact the Idea or, for that matter, genuinely 'conceptual'. To be sure, the transitions in the Doctrine of the Concept have come a long way in shedding their abstract immediacy and reflexive structures; within this part of the *Logic* a novel form of logical movement has indeed emerged, namely, self-development. But as we can see from the closing passage of the *Logic*, the development of the concept *prior to* the transition to nature remains plagued by residual abstractness. This is why Hegel can describe the transition from 'subjective purpose' to 'life' as a *becoming*, a transition from something *to something other*. There remains a minimal gap between the various stages of the concept's development in the subjective logic. With the self-determination of the Idea *as nature*, however, this 'gap' is finally *closed*. The 'gap', in other words, between the Idea and its 'other' is *wholly overcome*; there is no difference *between* the Idea and nature that is not internal to the Idea itself. Nature just is the Idea *in its self-development*, its *differentiation* from itself.[86] Why then is the 'free release' of the Idea necessary? Because only with the 'free release' into nature does the Idea determine itself as *other* and yet remain what it is in 'absolute self-assurance and inner poise'[87]—precisely what conceptual self-determination is supposed to *be*. Indeed, the 'inner poise' or 'rest' achieved by the Idea in its 'self-release' is nothing other than the ontological structure of *remaining* oneself in one's *own* otherness. Thus, the *true* Idea, the Idea that is no longer held back by its abstractness, is the Idea as *manifest*. This is why nature's externality is the mode 'in which the Concept first *is*'.[88]

I think Pippin is wrong, then, when he makes the following claim:

> There is no logical or conceptual incompleteness in the [*Logic*]. It remains wholly self-determining, autonomous and complete in itself … There is rather some sort of existential—I don't think there is any other word for it—dissatisfaction with a conceptual order "shut in on itself," and a resolve to examine nature as it is treated by the individual sciences in all its manifold forms.[89]

*Pace* Pippin, I have tried to show that there is a *logical problem*, for Hegel, with the idea of a conceptual order 'shut in on itself'; such a conceptual order isn't logically possible, and this is why nature must, as a matter of logical necessity, exist.[90]

**Implications for the Philosophy of Nature**

If this is indeed how the transition from logic to nature works, then it has significant implications for Hegel's conception of nature and his understanding of the *philosophy* of nature. First, it means that nature is fundamentally strange. For nature is, on the one hand, the Idea itself: 'In nature, it is not something-other than the Idea that is known.'[91] Yet on the other hand, nature is the Idea insofar as the Idea is *other* than itself—hence the *external* character of nature as opposed to the inwardness of the Idea: nature is 'the Idea … in the form of externalisation [*Entäußerung*]'.[92] It follows from this that nature is the self-determining Idea which is not *explicitly* rational and self-determining but, on the contrary, only implicitly so; nature is reason that is largely irrational and determined, to a great extent, by contingency. This is why, in the transition from logic to nature, the extraordinary rational complexity of the abstract Idea 'collapses' into an ontologically impoverished reality. Yet, significantly, in being *other* than itself, the Idea finally becomes what it has been implicitly all along in the *Logic*: an absolute which is absolute *even in its own ontological poverty* (i.e., nature).

Of course, the dialectic does not terminate in such ontological poverty and self-externality. By setting aside the contingencies of nature and unpacking its remnant, albeit implicit, rationality, Hegel will seek to demonstrate how the logical structure of nature immanently generates more and more rational forms, such as gravitational motion, light, and—at the most rational stages of nature—life. Indeed, through the gradual 'inwardisation' of self-external being, the dialectic of nature will even give way to a form of reason that is no longer *other* than itself, namely, *spirit*. Hegel is thus no reductive naturalist; the Idea cannot be *reduced* to nature, for it ultimately proves to be far more than nature. Yet, as the transition from logic to nature demonstrates, the ontologically primary manifestation of the Idea *is* strictly natural; the spiritual only ever proves to have reality on the basis of a dialectic of the Idea's self-externality, i.e., a dialectic that begins with spatially-extended matter. The 'release' of the Idea does not, therefore, only teach us what nature essentially is for Hegel (i.e., self-external being or reason); it also teaches us that nature exists in some more basic or fundamental way than spirit exists. Spirit is no *less real* than nature; but the reality of spirit is in some sense *dependent upon* the reality of nature. Nature is the most basic expression of reason.

This leads to the third lesson that can be learned from the logical transition to nature: because nature *is reason* (albeit in its self-externality), the *philosophy* of nature will be *rational*, i.e., it will continue to unpack the *logical forms* of *what is*. Indeed, since the transition from logic to nature is itself a *strictly logical* transition—and, what is more, the first

fully 'conceptual' transition in Hegel's technical sense of the term—the philosophy of nature will proceed by way of strictly rational or logical derivations of the various forms of nature. One leaves behind the abstract logic of the *Science of Logic*, then, in order to understand the logic of the Idea as a concrete *reality*. As Martin Drees remarks, 'Abstract thought, thinking simply in abstract determinations, is incapable of analyzing the Idea's *existent being*. Consequently, within the medium of the *Logic*, the *absolute Idea* is still in a mode of under-determination.'[93] And yet, it is precisely through the self-development of the Idea that the abstract logic proves to require a concrete logic, i.e., a logic that attends to reason as it manifests itself in, or rather, *as* a real world.

There is thus some truth to the young Marx's claim that 'the entire Logic is proof that abstract thought is nothing for itself, that the Absolute Idea is nothing for itself, and only *nature* is something.'[94] Yet Marx was wrong (as was Schelling before him), to claim that reason releases itself into nature by virtue of its prior *experience* in the material world.[95] Reason determines itself as nature *because it is truly rational*, i.e., because it only proves to be genuinely self-determining and rational by *freely abandoning* its pure rationality, by becoming alien to itself.

Interestingly, this means that the philosopher of nature is required to engage with the natural sciences in order to first unearth the *concrete* logic of reason. For unlike the abstract logic of reason, which remains bound up within the interiority of (non-subjective and impersonal) thought, the concrete logic of reason will need to take into account empirical discoveries of nature's rational structure. Such methodological issues will be covered in the following chapter.

## Notes

1 Errol E. Harris, *The Spirit of Hegel*, p. 116. Harris does not only claim that Hegel was well versed in the sciences of his day, but that Hegel's philosophy of nature has often proved prescient in light of more recent natural-scientific developments.

2 See especially Robert Pippin, whose comments about the philosophy of nature are closely related to his more general disregard for Hegel's Schellingianism. According to Pippin, Hegel is a 'post-Fichtean' committed to a form of 'normative monism', i.e., the insistence upon the ' "absolute" or unconditioned status of the space of reasons' (Robert Pippin, 'Fichte's Alleged Subjective, Psychological, One-Sided Idealism' in *The Reception of Kant's Critical Philosophy: Fichte, Schelling, and Hegel*, ed. Sally Sedgwick [Cambridge: Cambridge University Press, 2000], pp. 166, 164). Thus, Pippin argues, Hegel differs from 'Schiller, Schelling, and even the Kant of the third *Critique*' insofar as he leaves behind their interest in what nature is and how it makes possible the kind of rational beings we are (Robert B. Pippin, *The Persistence of Subjectivity: On the Kantian*

*Aftermath* [Cambridge: Cambridge University Press, 2005], p. 189). Pippin writes:

> There is, of course, a *Philosophy of Nature* in his *Encyclopedia*, but as anyone who has slogged through it knows, there is a lot there that seems to turn no other wheel elsewhere in what Hegel says, and very little in the *Philosophy of Spirit* seems to depend on it or refer back to it.

Pippin, *The Persistence of Subjectivity*, p. 189. These latter comments emerge within a debate between Pippin and John McDowell, who appears to Pippin to be mistakenly 'tied to the problem of nature' (p. 190). Significantly, however, McDowell's supposed rehabilitation of the concept of nature turns on understanding the 'space of reasons' in terms of 'second nature'—something that is distinct from nature understood as that which is studied by the natural sciences (*Mind and World* [Cambridge, MA: Harvard University Press, 1996], p. 84). Thus, while there is certainly something Hegelian about McDowell's distinction between the natural world (as ordinarily understood) and the human world—indeed, this is what the entire distinction between nature and spirit concerns for Hegel—McDowell is in no way turning to the former in his focus on *second* nature. McDowell's Hegel-inspired view therefore also ends up 'leaving behind' the philosophy of nature (to use Pippin's phrase). A third perspective is worth mentioning here, and that is Terry Pinkard's naturalist interpretation of Hegel. While Pinkard's *Hegel's Naturalism* does grant more significance to Hegel's philosophy of animal life—i.e., the final part of the philosophy of nature—it remains focused on what nature is *for living and thinking beings like us*. Thus, for Pinkard, 'the task of a *Naturphilosophie* … [is] to show what nature as a whole must be like if nature is indeed the kind of object that is best studied by empirical natural science' (*Hegel's Naturalism: Mind, Nature and the Final Ends of Life* [Oxford: Oxford University Press, 2012], p. 21). In the following four chapters I aim to demonstrate that Hegel's philosophy of nature is far more ambitious than this.

3 Beiser, 'Hegel and Naturphilosophie', p. 137.

4 In this respect, we can simply note that, despite the profound efforts of philosophers such as Hyppolite to understand and explain Hegel's system on its own terms, i.e., precisely as a system of metaphysics, Kojève's idiosyncratic, anthropological reading remains canonical to this day outside of Hegel scholarship. Cf. Jacques Derrida, 'The Ends of Man' in *Margins of Philosophy*, trans. Alan Bass (Chicago: University of Chicago Press, 1972), pp. 109–136.

5 The relationship between the *Phenomenology* and Hegel's later work is in fact more complicated than my comments here suggest. To note just one significant issue, Hegel thinks that the *Phenomenology* ultimately demonstrates to ordinary consciousness that the standpoint of philosophical science is already immanent to ordinary ways of thinking (*W* 3: 29; *Phenomenology of Spirit*, trans. A.V. Miller [Oxford: Clarendon Press, 1977], pp. 14–15), which suggests that what we find in the *Phenomenology* will not be *entirely* unrelated to philosophy proper. For a comprehensive account of the various interpretations

of the relationship between the *Phenomenology* and the system, as well as an interpretation that responds to each of these, see Ardis B. Collins, *Hegel's Phenomenology: The Dialectical Justification of Philosophy's First Principles* (Montreal & Kingston: McGill-Queen's University Press, 2013), especially Chapters 2 and 11.

6 Schelling's Letter to Fichte on 19 November 1800 in *HKA* III/2.1: 280; *The Philosophical Rupture between Fichte and Schelling*, p. 45.

7 Pippin—in a rare instance of noting the continuity between Schelling and Hegel—mentions Hegel's indebtedness to Schelling with respect to the idea of an absolute identity that cannot be reduced to the one-sidedness of mere objectivity or mere subjectivity. Pippin, *Hegel's Realm of Shadows*, p. 13.

8 *W* 9: Introductory Addition, 2; *Philosophy of Nature*, pp. 3–4.

9 See, for example, the Tübingen 'Fragment on *Volksreligion* and Christianity' (*W* I: 9–103; *Miscellaneous Writings of G. W. F. Hegel*, pp. 44–71); 'The Positivity of the Christian Religion' (*W* I: 104–233; *Early Theological Writings*, pp. 67–181); and 'The Spirit of Christianity and its Fate' (*W* I: 274–418; *Early Theological Writings*, pp. 182–301), none of which were published during Hegel's lifetime.

10 For a concise summary of the works authored by Hegel in the *Critical Journal of Philosophy* (1801–1803), see Michael Inwood, *A Hegel Dictionary* (Oxford: Blackwell Publishing, 1992), pp. 65–68.

11 For Pierre Adler's English translation of Hegel's Latin dissertation and the twelve theses he defended in August 1801, see *Miscellaneous Writings of G.W.F. Hegel*, pp. 170–206. Hegel defended these theses against Schelling, Friedrich Immanuel Niethammer, and Thomas Schwarzott. Schelling's brother, Karl Eberhard Schelling, defended Hegel as the 'respondent'. See *Hegel: The Letters*, p. 86; Pinkard, *Hegel: A Biography* (Cambridge: Cambridge University Press, 2000), pp. 106–107; and H.S. Harris, *Hegel's Development: Night Thoughts (1801–1806)*, pp. xxv-xxxi. For Schelling's remarks on Hegel's theses, see Hegel, *Dissertatio Philosophica De Orbitis Planetarum*, ed. and trans. Wolfgang Neuser (Weinheim: Acta Humaniora VCH, 1986), pp. 144–145.

12 *W* 2: 12; *The Difference between Fichte's and Schelling's System of Philosophy*, trans. Walter Cerf and H.S. Harris (Albany: State University of New York Press, 1977), p. 82. Translation modified.

13 *W* 2: 118; *Difference*, p. 176. Translation modified.

14 According to Hegel, Reinhold also misunderstood Fichte's idealism. *W* 2: 62; *Difference*, p. 127.

15 Schelling appears to have been pleased with Hegel's defence. *SW* I/7: 36; *Statement on the True Relationship of the Philosophy of Nature to the Revised Fichtean Doctrine*, trans. Dale E. Snow (Albany: State University of New York Press, 2018), p. 33.

16 *W* 2: 76; *Difference*, p. 139. Emphasis modified.

17 *W* 2: 76; *Difference*, p. 139.

18 *W* 2: 94; *Difference*, p. 155.

19 Sally Sedgwick, *Hegel's Critique of Kant: From Dichotomy to Identity* (Oxford: Oxford University Press, 2012), p. 62.

20 The implicit Spinozism in this viewpoint is made more explicit further on in the *Difference* essay:

> Because of this inner identity, the two sciences [i.e., the science of consciousness and the science of nature] are equal as to their coherence and their sequence of stages [*Stufenfolge*]. They corroborate each other. One of the older philosophers put it somewhat like this: the order and coherence of ideas (the subjective) is the same as the coherence and order of things (the objective).

*W* 2: 106; *Difference*, p. 166. Cf. Spinoza's *Ethics*, Part II, Proposition 7.

21 For the mature Hegel's most detailed account of the logic of 'indifference', see the *Science of Logic*, where measure is determined as indifference prior to the logical transition to the doctrine of essence (*W* 5: 445–457; *Science of Logic* [Miller], pp. 375–385).

22 *W* 2: 96; *Difference*, p. 156. Compare this to Hegel's critique of 'indifference' in the *Lectures on the History of Philosophy*: 'But the expression "indifference" is ambiguous, for it means indifference in regard to both the one and the other; and thus it appears as if the content of indifference, the only thing which makes it concrete, were indifferent.' *W* 20: 439; *Lectures on the History of Philosophy: Volume III*, p. 529.

23 Note, also, that following Schelling in the *Presentation*, Hegel understands this absolute 'indifference point' as *reason*, and reason in this way becomes identified as the inner essence and *identity* of nature and spirit (*W* 2: 100–101; *Difference*, pp. 160–161). For a closer reading of Hegel's conception of identity in the *Difference* essay and its difference from Schelling's own conception of identity, see Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 120–124.

24 *W* 10: 426.

25 As Dieter Wandschneider remarks, 'in constrast to Schelling's continual reformulation of his philosophy, Hegel's philosophical conception forms a consistent, reasoned system, at least with respect to its construction.' Wandschneider, 'The Philosophy of Nature of Kant, Schelling and Hegel', p. 86.

26 *W* 20: 453; *Lectures on the History of Philosophy: Volume III*, pp. 541–542.

27 *W* 9: § 250, 34; *Philosophy of Nature*, p. 23.

28 *W* 6: 282; *Science of Logic* (Miller), p. 607.

29 *W* 9: § 250, 34; *Philosophy of Nature*, p. 23. Translation and emphasis modified.

30 *W* 9: Remark to § 250, 34–35; *Philosophy of Nature*, p. 23.

31 *W* 9: Remark to § 250, 35; *Philosophy of Nature*, p. 23. On contingency in Hegel generally and in the philosophy of nature in particular, see John Burbidge, *Hegel's Systematic Contingency* (London: Palgrave Macmillan, 2007).

32 Indeed, reason exists in nature, according to Hegel, 'as conceptless, as subjectless, real, as being in general' (*VPN* 1: 510); this is clearly not a hyperrationalist conception of nature that makes no room for the irrational.

33 David Farrell Krell, *Contagion: Sexuality, Disease, and Death in German Idealism and Romanticism* (Bloomington: Indiana University Press, 1998), p. 119.

34 Note, however, that one can consider nature *rationally* without understanding reason as logic. A rationalist philosophy of nature, in other words, need not be an explicitly logical philosophy of nature. As I argued in Part I above, I take Schelling's philosophy of nature to be of this kind.
35 *W* 9: Addition to § 246, 19; *Philosophy of Nature*, pp. 9–10.
36 *W* 10: Addition to § 381, 24; *Philosophy of Mind*, p. 13. Translation modified.
37 For a compelling critique of Hegel's conception of nature as the realm of contingency, see W. T. Stace, *The Philosophy of Hegel: A Systematic Exposition* (New York: Dover, 1955), pp. 307–311. I draw upon this critique in Chapter 8 below.
38 *W* 20: 444; *Lectures on the History of Philosophy: Volume III*, pp. 535–536.
39 *W* 20: 435; *Lectures on the History of Philosophy: Volume III*, p. 518.
40 *W* 20, p. 436; *Lectures on the History of Philosophy: Volume III*, p. 527.
41 'Schelling, indeed, had this conception in a general way, but he did not follow it out in a definite logical method, for with him it remained an immediate truth, which can only be verified by means of intellectual intuition.' *W* 20: 436; *Lectures on the History of Philosophy: Volume III*, pp. 526–527.
42 *W* 3: 50; *Phenomenology of Spirit*, p. 30.
43 *W* 3: 50; *Phenomenology of Spirit*, p. 30.
44 *SW* I/5: 256; *On University Studies*, p. 49.
45 *W* 20: 437–438; *Lectures on the History of Philosophy: Volume III*, p. 529.
46 Another way to put Hegel's criticism of Schelling's doctrine of the potencies is that, for Hegel, such a doctrine doesn't *explain* anything. See Walther Christoph Zimmerli, 'Potenzenlehre versus Logik der Naturphilosophie' in *Hegels Philosophie der Natur: Beziehungen zwischen empirischer und spekulativer Naturerkenntnis*, ed. Rolf-Peter Horstmann and Michael John Petry (Stuttgart: Klett-Cotta, 1986), pp. 309–327 and Berger and Whistler, *The Schelling–Eschenmayer Controversy, 1801*, pp. 109–116.
47 *W* 20: 445, 451–452; *Lectures on the History of Philosophy*, pp. 543–544. In the addition that opens the *Encyclopaedia* Philosophy of Nature, Hegel claims that the philosophy of nature:

> has in many respects, in fact for the most part, been *transformed* into an external formalism and perverted into a thoughtless instrument for superficial thinking and fanciful imagination … I said more about this some while ago in the preface to the *Phenomenology of Spirit* … It is on account of such charlatanism that the Philosophy of Nature, especially Schelling's has become discredited.

*W* 9: Introductory Addition, 9; *Philosophy of Nature*, p. 1. Emphasis modified. For the passage in the *Phenomenology* Hegel references here, see *W* 3: 49–51; *Phenomenology*, pp. 30–31. See also *W* 8: Remark to § 12, 57; *Encyclopaedia Logic*, *Part I of the Encyclopaedia of the Philosophical Sciences*, trans. T.F. Geraets, W.A. Suchting, and H.S. Harris (Indianapolis: Hackett, 1991), p. 37. Of course, these statements do not imply that there isn't any continuity between Schelling's own philosophy of nature and its Schellingian offshoots. Although 'Oken, Troxler, and others lapse completely into an empty formalism' according to Hegel, such formalism 'plays a part even in Schelling's

philosophy, in that he often carries his parallels too far' (*W* 9: Addition to § 359, 472; *Philosophy of Nature*, p. 388). That being said, these remarks should all be taken to substantiate what Hegel states in his personal correspondence with Schelling regarding the difference between Schelling's own philosophy and that of his followers:

> In the Preface [to the *Phenomenology*] you will not find that I have been too hard on the shallowness that makes so much mischief with your forms in particular and degrades your science into a bare formalism. I need not tell you, by the way, that your approval of a few pages would be worth more to me than the satisfaction or dissatisfaction of others with the whole.

Hegel to Schelling, 1 May 1807, in *Briefe von und an Hegel*, Volume I, ed. Johannes Hoffmeister (Hamburg: Felix Meiner, 1952), p. 162; *Hegel: The Letters*, p. 80.

48 *W* 9: Remark to § 359, 471; *Philosophy of Nature*, p. 387. For those who find the doctrine of the potencies to be perfected in Schelling's late work—where the potencies take on an Aristotelian significance—Hegel may have a point about the insufficiency of the early doctrine of the potencies. See Dews, *Schelling's Late Philosophy in Confrontation with Hegel*, p. 160.

49 It is also worth noting that Hegel can himself appear just as formalistic as Schelling—especially when it seems as though he is merely applying logical structures to nature. See Zimmerli, 'Potenzenlehre versus Logik der Naturphilosophie', p. 324. Hegel is of course aware of the fact that logic can appear abstract and formalistic, lacking in determinate content (*W* 5: 54–55; *Science of Logic*, pp. 57–58). The challenge that Schelling and Hegel both grapple with is to understand the most general features of the natural world, abstracted from particular things, yet in a way that does not ignore the determinacy of those general features and their differences from one another. I have discussed this issue in more detail with Whistler in *The Schelling–Eschenmayer Controversy, 1801*, pp. 109–116.

50 In the system, this first becomes apparent at the beginning of the logic. *W* 5: 117–122; *Science of Logic* (Miller), pp. 111–114.

51 *W* 5: 121; *Science of Logic* (Miller), p. 113. On the idealist reception of this Spinozist principle, see Yitzhak Y. Melamed, 'Omnis Determinatio Est Negatio: Determination, Negation, and Self-Negation in Spinoza, Kant, and Hegel' in *Spinoza and German Idealism*, ed. Eckhart Förster and Yitzhak Y. Melamed (Cambridge: Cambridge University Press, 2012), pp. 175–197. See also Robert Stern, '"Determination is negation": The Adventures of a Doctrine from Spinoza to Hegel to the British Idealists', *Hegel Bulletin* 37.1 (2016), pp. 29–52.

52 This is a simplification of the far more nuanced dialectic found at the beginning of the *Science of Logic*. Cf. *W* 5: 115–131; *Science of Logic* (Miller), pp. 109–122.

53 Cf. Edward Allen Beach, 'The Later Schelling's Conception of Dialectical Method, in Contradistinction to Hegel', *Owl of Minerva*, 22 (1990), pp. 35–54 and *Potencies of God(s): Schelling's Philosophy of Mythology* (Albany: State University of New York, 1994), pp. 85–91, 113–114.

54 'Nature exhibits no freedom in its existence, but only *necessity* and *contingency*.' *W* 9: § 248, 27; *Philosophy of Nature*, p. 17. As we will see in the chapters to follow, nature does in fact exhibit some kind of freedom, for Hegel, but this freedom is not the robust freedom exhibited in spiritual life.
55 *SW* I/10: 131; *On the History of Modern Philosophy*, trans. Andrew Bowie (Cambridge: Cambridge University Press, 1994), pp. 138–139.
56 *SW* I/10: 132; *On the History of Modern Philosophy*, pp. 138–139.
57 *SW* I/10: 138; *On the History of Modern Philosophy*, p. 142.
58 See, for instance, Søren Kierkegaard, *Repetition*, ed. and trans. Howard V. Hong and Edna H. Hong (Princeton, NJ: Princeton University Press, 1983), p. 310; Ludwig Feuerbach, *Fragments Concerning the Characteristics of My Philosophical Development* in *The Fiery Brook: Selected Writings*, trans. Zawar Hanfi (London and New York: Verso, 2021), p. 270; Karl Marx, *Economic and Philosophic Manuscripts* in *Selected Writings*, trans. Loyd D. Easton and Kurt H. Guddat (Indianapolis/Cambridge: Hackett, 1994), p. 94; and Ernst Bloch, *Subjekt–Objekt: Erläuterungen zu Hegel—Erweiterte Ausgabe* (Frankfurt am Main: Surhkamp, 1962), pp. 201–206. On Adorno's relationship to this history of Hegel-interpretation, see Franck Fischbach, 'Adorno and Schelling: How to "Turn Philosophical Thought Towards the Non-Identical" ', trans. James A. Clarke and Julia Key, *British Journal for the History of Philosophy* 22.6 (2014), pp. 1167–1179.
59 *W* 3: 65; *Phenomenology*, p. 44. Translation modified.
60 *W* 5: 38; *Science of Logic* (Miller), p. 45. It is significant to note that although Hegel's rationalism is, like Schelling's, profoundly influenced by Spinozism, Hegel insists—as does the early Schelling—that one must return to ancient Greek metaphysics in order to revitalise contemporary philosophy. For ancient Greek philosophy not only takes conceptual thought to be disclosive of being (as do the pre-Kantian rationalists), but it understands the very movement of thought to be nothing other than the dialectical movement of being itself.
61 *W* 8: Preliminary Conception, § 24, 81; *Encyclopaedia Logic*, p. 56.
62 That the late Schelling, at times, fails to acknowledge this about Hegel is somewhat mysterious. After all, Hegel's conception of reason as non-subjective comes directly out of the early Schelling's conception of reason and his critique of what both philosophers take to be the limited, subjective standpoint of Fichte's *Wissenschaftslehre*. On this point and on the difficulty of explaining the late Schelling's Hegel-critique, see Rolf-Peter Horstmann, 'Logifizierte Natur oder naturalisierte Logik? Bemerkungen zu Schellings Hegel-Kritik' in *Hegels Philosophie der Natur: Beziehungen zwischen empirischer und spekulativer Naturerkenntnis*, ed. Rolf-Peter Horstmann and Michael John Petry (Stuttgart: Klett-Cotta, 1986), p. 306.
63 'The system of logic is the realm of shadows, the world of simple essentialities [*einfachen Wesenheiten*] freed from all sensuous concreteness.' *W* 5: 55; *Science of Logic* [Miller], p. 58.
64 Feuerbach, *Fragments Concerning the Characteristics of My Philosophical Development*, p. 269.
65 *W* 9: § 247, 24; *Philosophy of Nature*, pp. 13–14.
66 *W* 9: Addition to § 247, 26–27; *Philosophy of Nature*, pp. 15–16.

67 *W* 9: Addition to § 247, 24; *Philosophy of Nature*, p. 14.
68 *Lectures on the Philosophy of Religion: Volume III*, p. 63.
69 *W* 5: 163–164; *Science of Logic* (Miller), pp. 148–149.
70 *W* 9: Addition to § 247, 24; *Philosophy of Nature*, p. 14.
71 *Lectures on the Philosophy of Religion: Volume III*, p. 63.
72 'The appearance of God in nature [occurs as]: (α) nature, (β) the Son of Man.' *Lectures on the Philosophy of Religion: Volume III*, p. 77.
73 As Magee has argued, Hegel's conception of logic is closely related to the German mystical tradition, which conceives of *logos* as the eternal essence of God that issues from his being. Although the mystical tradition failed, on Hegel's view, to arrive at a rational *explication* of this process, that tradition rightly saw that *logos* is only genuinely divine insofar as it 'flows forth' as a world. See Magee, *Hegel and the Hermetic Tradition* and 'Hegel and Mysticism' in *The Cambridge Companion to Hegel and Nineteenth-Century Philosophy*, pp. 253–280.
74 *W* 8: Addition to § 244, 393; *Encyclopaedia Logic*, p. 307. Emphasis modified. The full passage reads:

> We have now returned to the Concept of the Idea with which we began [at the beginning of the Logic]. At the same time this return to the beginning is an advance. What we began with was being, abstract being, while now we have the Idea as being; and this Idea that is, is Nature.

75 *W* 6: 573; *Science of Logic* (Miller), p. 843. Emphasis modified.
76 *SW* I/10: 153; *On the History of Modern Philosophy*, pp. 154–155. At this stage in Schelling's intellectual development, he has distanced himself from Boehme's theosophy, although he continues to have far more appreciation for Boehme's ideas than he does for Hegel. On Schelling's view, Boehme's failures are largely due to his lack of philosophical rigour, whereas Hegel exemplifies all the rigour required of philosophy and yet still 'says nothing' with his metaphorical language.
77 *SW* II/3: 89; *Grounding of Positive Philosophy*, p. 151.
78 *SW* II/3: 121–122; *Grounding of Positive Philosophy*, p. 175.
79 *W* 6: 573; *Science of Logic* (Miller), p. 843. Emphasis modified.
80 See, for example, Donald Phillip Verene, 'Hegel's Nature', *Hegel and the Philosophy of Nature*, ed. Stephen Houlgate (Albany: SUNY Press, 1998), p. 220; Pinkard, *Hegel's Naturalism*, p. 36n22; and Robert B. Pippin, 'Logical and Natural Life: One Aspect of the Relation between Hegel's *Science of Logic* and his *Encyclopedia*' in *Hegel's Encyclopedia of the Philosophical Sciences: A Critical Guide*, ed. Sebastian Stein and Joshua I. Wretzel (Cambridge: Cambridge University Press, 2021), p. 24.
81 Stace, *The Philosophy of Hegel*, p. 306. As Stace writes, the 'free release' of the idea into nature is 'clearly poetic [metaphor] and no more' (*The Philosophy of Hegel*, p. 305). Martin Drees also argues that 'the logical structure of the Idea's progress to nature is independent of the meta-theoretical and meta-logical description employed by Hegel in sketching the form of the advance.' Martin Drees, 'The Logic of Hegel's Philosophy of Nature' in *Hegel and Newtonianism*, p. 95.

82 *W* 6, p. 573; *Science of Logic* (Miller), p. 843. Translation modified.
83 *W* 6, p. 573; *Science of Logic* (Miller), p. 843. Emphasis modified.
84 *W* 8: § 244, 393; *Encyclopaedia Logic*, p. 307.
85 *W* 6, p. 573; *Science of Logic* (Miller), p. 843. Translation and emphasis modified.
86 My interpretation of this passage owes a great deal to conversations with Richard Lambert.
87 *W* 6: 573; *Science of Logic* (Miller), p. 843.
88 *W* 9: Addition to § 251, 37; *Philosophy of Nature*, p. 25. Translation and emphasis modified.
89 Pippin, 'Logical and Natural Life', p. 24.
90 My interpretation of the transition from logic to nature belongs, I take it, within the category of 'dogmatic-rationalist readings' criticised by Christian Martin, since I do understand Hegel's claim about 'the "interiority" of the concept in nature' literally. Christian Martin, 'From Logic to Nature' in *Hegel's Encyclopedia of the Philosophical Sciences: A Critical Guide*, ed. Sebastian Stein and Joshua I. Wretzel (Cambridge: Cambridge University Press, 2021), pp. 103–104. According to Martin, the late Schelling's critique of Hegel is valid only to the extent that Hegel is read in a dogmatic-rationalist manner (Martin, 'From Logic to Nature', p. 94). I hope to have shown in this section that the late Schelling is misguided in this critique even if we do interpret Hegel as arguing that the determinations of pure logic necessitate the existence of nature. That is to say, the late Schelling's critique falls short even when we affirm a dogmatic-rationalist interpretation of Hegel.
91 *W* 8, Remark to § 18, p. 64; *Encyclopaedia Logic*, p. 42. Translation modified.
92 *W* 8, Remark to § 18, p. 64; *Encyclopaedia Logic*, p. 42.
93 Drees, 'The Logic of Hegel's Philosophy of Nature', p. 93.
94 Marx, *Economic and Philosophic Manuscripts*, p. 94.
95 Marx, *Economic and Philosophic Manuscripts*, p. 94. See also *SW* I/10: 131; *On the History of Modern Philosophy*, pp. 138–139.

# 5 Nature's Logic

In Chapter 4, we learned that, according to Hegel, reason *is* only insofar as it manifests itself as a spatiotemporal world, and that the spatiotemporal world is, fundamentally, an expression of self-determining reason, albeit in alienated form. Consequently, there is no reason without nature, and there is no nature without reason (or the 'absolute Idea'). This thought is fundamental to Hegel's logical idealism, and it is central to my interpretation of Hegel that this relationship between *reason* and nature not be confused with the relationship between *spirit* and nature.

There is good reason that critics of Hegel throughout the last two hundred years have understood the transition from logic to nature in a more subjectivist vein and thereby ignored what I have called 'the primacy of the impersonal' in Hegel's system. For we ordinarily associate 'logic', 'reason', 'thought', and 'ideas' (or even an 'Idea') with either individually existing human beings or communities of such individuals who actively *think*. Why would Hegel have used such terms if he really understood nature to be ontologically more fundamental than spiritual subjectivity, as I am suggesting? It may be helpful to recall that Hegel is by no means the first philosopher to conceive of logic or reason as impersonal or non-human. Long before Hegel, philosophers understood reason as something far more expansive than some faculty of the human mind. Indeed, Hegel himself traces his understanding of reason back to Heraclitus' conception of *logos* and Anaxagoras' conception of *nous*.[1] Like the Schellingian hypothesis regarding the world-soul, Hegel's understanding of reason—or the Idea—as appearing as *nature* does not yet suggest anything about beings like us who *think*, i.e., beings who can *comprehend* the reason of the world.

Yet unlike the Presocratics upon whom he depends for this conception of reason as the intrinsic intelligibility of the world, Hegel understands nature to be an *impoverished*, *negative* expression of reason. As we saw above, nature is the primary expression of the self-movement of the Idea, but in such a manner as to be lacking actual selfhood. Nature is, in other words,

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rational self-development without an explicit self. And this means that reality will need to be more than nature—indeed, *other* than nature—if it is to become fully manifest in reality. This 'other' is what Hegel calls 'spirit'.

I will not consider Hegel's conception of spirit in detail here.[2] But in order to throw further light upon the relationship between reason and nature, I would like to consider once again his theological description of the relationship between logic, nature, and spirit. In the following passage, Hegel describes how God reveals himself first in the finite, carnal form of world and Christ, and only subsequently in the *subjective* life of spirit:

> God reveals Himself in two different ways: as Nature and as Spirit. Both manifestations are temples of God which He fills, and in which He is present. God, as an abstraction, is not the true God, but only as the living process of positing His Other, the world, which, comprehended in its divine form is His Son; and it is only in unity with His Other, in Spirit, that God is Subject.[3]

What I want to emphasise here is that God the Father is logically distinct not only from his creation but from the Holy Spirit, in which God becomes truly subjective or personal in the Christian community. It is clear from this that, insofar as God the Father is a theological representation of the absolute Idea, Hegel understands the Idea as notionally separate from its expression as spirit, even though the Idea must manifest itself *as* spirit in order to achieve its full realisation. This distinction between the Idea and spirit is necessary if we are to understand nature as the logically *primary* manifestation of the Idea and not as a posit of spiritual subjectivity. Hegel's interpretation of the Trinity is therefore quite helpful in elucidating his conception of the relationship between logic and nature, since in the Trinity, God the Father (logic) and the Holy Spirit are clearly distinguished, despite their ultimate unity.

But when Hegel turns his attention back to a philosophical, as opposed to theological, presentation of the Idea's triplicity, he often fails to properly distinguish reason from spirit. Indeed, at times Hegel appears to conflate the two, for example, when he describes nature not as the *Idea* in the form of otherness, but as self-estranged *spirit*: 'Nature is spirit estranged from itself; in nature, spirit lets itself go (*ausgelassen*).'[4] In another addition—and it is worth noting that such remarks are by and large found in the additions to the *Encyclopaedia* rather than the *Encyclopaedia* proper—we read the following:

> The procession [*Hervorgehen*] of spirit from nature must not be understood as if nature were the absolutely immediate and the *prius*, and the original positing agent, spirit, on the contrary, were only something

> posited by nature; rather it is nature which is posited by spirit, and the latter is the absolute *prius*.[5]

With remarks such as these, it looks as though the 'release' of the Idea into nature discussed in Chapter 4 above in fact presupposes that being is *already* spiritual within the strictly logical domain of the Idea and that nature can only be understood from the standpoint of spirit, as spirit's 'other' structurally analogous to the 'not-I' posited by the 'I' in Fichte's *Wissenschaftslehre*. For this reason, such remarks are extraordinarily misleading. But rather than dismiss them as mere slips of Hegel's tongue, it is worth attempting to understand why Hegel may have had good reason to describe nature in this manner.

### The Priority of Nature and the Place of Spirit in the System

In order to make sense of such remarks, let us consider the place of spirit in Hegel's system as a whole. According to Hegel, spirit is the immanent *return* of the absolute Idea to itself through the otherness of nature. Why is spirit a 'return' to the Idea? Precisely because, as we have seen, nature is the primary manifestation of the Idea, but the Idea in alienated form. Yet for Hegel, nature is not *only* alienated reason but also a process in which natural forms become progressively more 'involved'. In other words, as nature makes its inner rational core gradually more explicit, nature proves to express more 'inward' forms of being and, eventually, the inwardness of spiritual life. 'Evolution is thus also an involution, in that matter interiorizes [*involviert*] itself to become life.'[6] How does this process of 'involution' or 'inwardisation' constitute a 'return' to the Idea? The absolute Idea, we recall, is at rest with itself in its movement, and the active repose achieved by the Idea is an expression of its inner freedom. When Hegel describes spirit as a 'return' of the Idea to itself, we should interpret this as a claim regarding spirit's achievement, in concrete reality, of the formal inwardness and self-determination that had previously only been explicated in the pure logic of the Idea. The Idea, therefore, 'returns' to itself with the logical emergence of spiritual freedom, because it is in spirit that inner, rational self-determination becomes explicit once again in Hegel's system. Thus, the becoming 'inner' of nature's self-external being is the 'return' of the Idea to itself from out of its sojourn in the externality of the natural world.

But all of this makes it look as though Hegel's system is one of exodus and homecoming, as if selfhood were there from the start, then 'lost' itself in nature, and through an immense struggle *regained* its selfhood in the activity of the human spirit. This view certainly allows us to see how nature could be understood as 'self-estranged spirit', since it implies that nature is

nothing other than the mediation between spirit and its *return*-to-self. It is this language of 'return' which, in my view, obscures Hegel's emergentist ontology. From the perspective of the system as a whole, spiritual subjectivity is certainly a 'return' to the inward selfhood described at the end of the *Logic*. But interpreting the 'return' of the Idea in this way ignores the fundamental difference between what precedes and what follows the transition from logic to nature. As we have already seen, Hegel understands the self-estranged form of the Idea, i.e., nature, to be the *ontologically primary form of reality*, hence its place in the system as the first part of *Realphilosophie*. And this means that the 'return' of the Idea to itself that occurs in the transition from nature to spirit is a *novel achievement within reality*.

I suggest, therefore, that we understand the 'return' of spirit as more of a 'turning back' of nature upon itself—a self that *was not* until this act *of* turning back. That is to say, the 'return' of the Idea to itself is not a return to a pre-*existing* self, but the turning-back of nature in such a manner as to achieve 'inwardness', in concrete reality, for the first time. On my reading, then, spirit is certainly a return-to-self, but this return is nothing other than being's immanent achievement of selfhood in reality, the development of being as 'subjective' precisely through the ontological movement of inwardisation.

Thus, even though nature and spirit are each manifestations of the Idea, they are quite distinct in the way they each make manifest self-determining reason. In spirit, the Idea is what it is; it is identical to itself. In nature, on the other hand, the Idea is outside itself. But because Hegel rejects the metaphysics of unmediated immediacy, he also rejects the notion that spirit, in which the Idea exists *as it is*, could come before nature. On the contrary, it is only through the alienated Idea, or nature, that self-determining reason comes to be expressed as itself in spiritual freedom.[7] In this way, spirit—in all of its configurations (anthropological, phenomenological, psychological, political, aesthetic, religious, and philosophical)—is nothing other than concrete and explicit *selfhood*, the achievement *in reality* of the strictly abstract and impersonal *nous* described at the end of the *Logic*.

Since spirit is the manifestation of explicitly self-determining reason in concrete reality, it is simultaneously identical to and distinct from the Idea in the latter's abstraction. Recognising this puts us in a position to interpret Hegel's misleading description of nature as 'spirit estranged from itself'. On my interpretation, Hegel makes these remarks *from the standpoint of spirit*. Once spirit knows that it is nothing other than reason come into its own, the 'self-release' of the Idea into nature can retrospectively be understood as the 'externalisation of spirit', but only insofar as this misleading articulation signifies the externalisation of spirit's fundamental ontological

structure, i.e., autonomous, self-determining reason, and not the externalisation of subjective 'thoughts' or 'ideas'. In other words, nature is not the self-externalisation of the human mind, but the externalisation of the human's fundamental character as self-determining reason. In this way, Hegel can interpret nature as 'self-estranged spirit', even though this is by no means the proper ontological determination of nature.

We should not, therefore, interpret Hegel's retrospective description of nature as self-estranged spirit to indicate any ontological dependence of nature upon spirit. For nature is only dependent upon spirit insofar as (i) spiritual freedom is the material presupposition for the philosophical *cognition* of nature to get underway (nature must have become spirit and spirit must have, through its own history, achieved the free standpoint of science if there is to be a speculative *philosophy of* nature); and (ii) this speculative philosophising—as the highest expression of spiritual freedom—is the *end* of the whole system, and as end, is nature's final cause.

It is this latter sense of spirit as *telos* that has often supported an interpretation of Hegel as privileging spirit, as if by noting that spirit is the ultimate point of nature, he is either making nature out to be a mere fall away from the true purpose of being, or he is suggesting that spirit is directing the whole dialectic of nature from on high. But this is to misconstrue the significance of teleology for Hegel. Spirit certainly plays a role in the development of nature in the sense that it is nature's end, but this end does not *draw* nature in ever increasing stages *to* itself. That is to confuse teleological explanation for something else. From Hegel's perspective, it is *nature* which immanently strives to become *spiritual*, positing spirit as its immanent end; nature itself seeks to overcome its self-external character and become explicitly self-determining reason. Thus, when Hegel says '*nous*, and more profoundly, *the spirit*, is the cause of the world',[8] we must insist upon the difference between the causality of *nous* and the causality of spirit. Whereas *nous* is the rational character of being that necessitates that there be a spatiotemporal world in the first place, spirit is the end towards which being immanently strives. This is why Hegel can say that spirit is the 'more profound' cause of the world, since it is the *purpose*, the actuality towards which nature is moving. As John Burbidge writes, 'Rather than being the presupposition of the philosophy of nature … in Hegel's mature system absolute spirit would be its final consummation.'[9] Hegel can describe this 'final consummation' of his system as the absolute *prius* only in the sense that spirit is the immanent *telos* of nature.

All of this being said, I think it is clear that Hegel does more harm than good to his conception of the nature-spirit relation when he speaks of nature as 'self-estranged spirit'.[10] In light of such remarks, it is completely understandable that readers of Hegel for two hundred years have taken him to conceive of nature as 'fallen spirit'. On this view, 'nature appears

as the purely *exterior* and *extrinsic* into which spirit has unaccountably *fallen*; nature is the *downfall* or *dejection* of spirit.'[11] Hegel is thus seen as just another step along the way in a history of subjectivist metaphysics—the very metaphysics Hegel's absolute idealism explicitly aims to overcome by returning to a Greek conception of being in terms of *logos*, *nous*, *eidos*. Significantly, not only does reading Hegel in this subjectivist vein get Hegel wrong; it also obscures his thought in such a manner as to conceal the *real* limits of his system. For, as I will argue in the conclusion to this study, it is precisely Hegel's commitment to Heraclitean movement—the becoming of *logos*—that makes Hegel's ontology of nature an ahistorical ontology unconcerned with a second sense of becoming, namely, becoming as natural-historical genesis. It is central, therefore, that we get Hegel's commitment to objective idealism right, for it is only then that we can see where this objective idealism falls short, and where Schellingian idealism indicates a more promising direction for a rationalist philosophy of nature, one attentive to the genesis of natural kinds.[12]

So much for pointing ahead to the conclusions of this book. At this stage, I want to focus exclusively on Hegel's compelling interpretation of nature's development towards its immanent, yet non-natural, *telos*. But before I attempt to elucidate the details of this logic whereby nature raises itself towards spiritual freedom (Chapters 6 and 7), it is important to clarify what precisely this immanent process *is* and how this process is *presented* in Hegel's system.

### Nature's System of Stages

That spirit is the *telos* of nature has significant consequences for how Hegel understands the project of the philosophy of nature. 'A rational consideration of nature must consider how nature is in its own self this process of becoming spirit, of sublating its otherness.'[13] As discussed above, however, it would be a misunderstanding of Hegel's conception of spirit if one were to interpret it as guiding nature towards it from on high. The *telos* of nature is nature's own immanent telos. What ensues in the philosophy of nature, then, is a presentation of the immanent stages or levels (*Stufen*) of nature through which it raises itself to progressively higher ontological determinations, culminating in the stages of organic life and, ultimately, humanity. As Hegel remarks, 'God does not remain petrified and dead; the very stones cry out and raise themselves to Spirit. God is subjectivity, activity, infinite actuality, in which otherness has only a transient being.'[14] Nature, therefore, will not be all that there is; it will lead to its own sublation in the spiritual life of the human.

Since 'nature is to be regarded as a system of stages, one arising necessarily from the other',[15] it is tempting to understand this system as one

of natural evolution. Indeed, at first blush, one might think that when Hegel describes nature as a 'system of stages' he has in mind some kind of natural-historical development by which simple physical processes evolve into more complex processes and, ultimately, complex forms of animal life. Interpreting Hegel in this way is appealing for many reasons, not least of which because it strikes the contemporary reader as sharing in our post-Darwinian worldview. Yet as far as Hegel's system is concerned, such an evolution of natural forms is entirely out of the question. 'A thinking consideration must reject such nebulous, at bottom, sensuous ideas, as in particular the so-called origination of the more highly developed animal organisms from the lower, and so on.'[16]

Now, it is important to distinguish between two different ways in which Hegel is opposed to conceiving of nature in terms of natural-historical evolution. It is true that he rejected natural-scientific theories regarding the gradual origination of species, and this is one sense in which Hegel can be described as opposed to conceiving of nature in terms of evolution.[17] This first sense of his opposition to thinking about nature's development in evolutionary terms, however, is somewhat insignificant. In order to see this, we can note that Hegel's opposition to evolutionary biological theory depends in large part upon the empirical support, or lack thereof, for this theory at the time of his engagement with the biological sciences. From a certain perspective, then, Hegel is similar to Kant, who—prior to revising his thought in light of Lavoisier's research—rejected the idea that chemistry could be a genuine science.[18] Given the fact that Darwin's *Origin of Species* wasn't published until 1859, Hegel's rejection of evolutionary theory could be read as part of a praiseworthy conservatism on Hegel's part. And one could go on to argue that, insofar as Hegel rejects evolution as an *empirical-scientific* theory of the origination of species, his system is not necessarily *incompatible* with evolutionary theory.[19] Indeed, although Hegel is unconvinced about theories of evolution, this—in itself—does not mean that his philosophy of nature is inconsistent with such theories. Hegel's doesn't think biological species are products of historical transformation, but perhaps one can be some sort of Hegelian and some sort of Darwinian at the same time.[20]

Yet there is a second sense in which Hegel is opposed to the idea of natural-historical evolution, and this is absolutely central to Hegel's entire nature-philosophical project. In fact, this more fundamental aspect of Hegel's anti-evolutionism goes a long way in distinguishing Hegel's philosophy of nature from his philosophy of spirit. Unlike the philosophy of spirit, which pays close attention to the historical unfolding of spirit's necessary stages, the philosophy of nature is in no way concerned with nature's history. According to Hegel, it is mistaken to understand nature's system of stages as an *evolutionary* system, because this system is a *strictly*

rational or logical system of stages. As such, his philosophy of nature is not simply opposed to the theory of evolution as a way to think about the origination of species, but much more fundamentally, Hegel sets his project apart from all historical considerations of nature. Thus, when he claims that one stage of nature 'is not generated *naturally* out of the other',[21] Hegel does not simply mean to reject some particular theory pertaining to organic life. On the contrary, Hegel is rejecting any philosophical attempt to grasp nature's fundamental structure in terms of natural-historical development.

That nature is not a historically progressive system does not, however, mean progress is lacking in nature. On the contrary, genuine progress for Hegel is *logical* or *rational* progress as opposed to the mere historical evolution with which a *wesenslogische Naturphilosophie* concerns itself. Far more important, from a Hegelian perspective, than the generation of one being from another *in time*, is the rational development that makes every necessary form of nature necessary.[22] Nature's system of stages is therefore the necessary progression that leads from the most basic or general determinations of nature as self-external reason to the most concrete determinations of nature in which nature achieves 'inwardness'. At times, this progression may appear to reflect nature's 'history' in some vague sense. Plant life, for example, 'precedes' animal life in nature's dialectic. But the only *philosophical* or *speculative* sense in which plant life precedes animal life is in the sense that the logical-natural determination of plant life is what necessitates, through its own internal rational structure, the logical-natural determination of animal life. This means that the existence of plants necessitates the existence of animals, but it does *not* mean that plants evolve *into* animals, nor does it mean that animals must necessarily appear on Earth at a later stage of nature's historical development. To take an example from earlier in the system: that 'light' emerges at the end of Hegel's speculative mechanics does not mean that Hegel understands light to emerge from sheer mechanical phenomena at some point in time. Rather, light emerges *logically* from the rational structure of mechanical motion. The nature-philosophical sequence of stages, therefore, is a strictly logical sequence. 'It is the necessity of the Idea which causes each stage to complete itself by passing into another higher one.'[23]

We can now see that whether or not species evolve from one another simply doesn't matter for Hegel, and his 'rejection' of biological evolution doesn't necessarily make his conception of nature 'outdated'. For the system of stages in Hegel's nature philosophy is a system of nature's gradual yet atemporal rational progression. From a Hegelian standpoint, it is of no consequence, philosophically speaking, when and how different forms of nature arise in a physical sense. Most likely there was a time

before spirit *actually* emerged on the earth. But whether or not such emergence 'happened' does not matter to Hegel. For philosophy concerns itself exclusively with ontological-rational necessity, i.e., *logical* emergence. 'Chronological difference [*Zeitunterschied*] has no interest whatsoever for thought.'[24]

Milič Čapek has it wrong, then, when he says that 'Nature is devoid of history' for Hegel, simply because Hegel appears to some to be not especially interested in palaeontology or the history of the earth as discussed by Cuvier and Lamarck.[25] It is not that nature has no history, for Hegel, but rather that the history of nature simply doesn't matter to him as a philosopher. Whether the ontological structures of the natural world become instantiated over a drawn-out period or emerge instantaneously has no rational significance. Another way to put this is that reason cannot tell us when plant-life emerges in the history of the earth or whether it emerges in time at all. What reason can tell us, according to Hegel, is *that* such forms must necessarily be instantiated and *why* this is so.

In Chapter 8, I will question this limit Hegel places on the philosophy of nature. As we will see, this limitation is closely related to Hegel's distinction between natural and spiritual temporality. For the time of spirit—unlike the time of nature—involves a philosophically significant *past*, and this is connected to Hegel's conception of spirit as being structurally analogous to his conception of time (and space being structurally analogous to nature). My intention here is therefore not to defend Hegel's conception of nature as an ahistorical system of stages, but to simply point out that, from Hegel's perspective, nothing philosophically significant is lost in such a conception. On the contrary, because rational, self-determining freedom only expresses itself with any concreteness in spiritual life, it is only spirit's history that matters for philosophy. That is to say, from the perspective of philosophical reason, nature may just as well have always been the way it is.

### Emergentism contra Organicism

Hegel understands his account of nature to be a philosophical account precisely insofar as it focuses exclusively upon the rational progression of nature's stages. Because Hegel describes his own project in this way, many contemporary scholars see in Hegel's philosophy of nature a less ambitious project than in the philosophies of nature pursued by Schelling and his followers. More specifically, it looks as though Hegel limits himself to articulating the *concepts* we employ in the various ways we come to understand the natural world and the epistemic framework within which these concepts and the concepts they imply are embedded. I take it that, on this interpretation, the reason Hegel doesn't attend to natural-historical development is because his philosophy of nature issues from a relatively

humble aim: to explicate the implicit rational structure at work in our understanding of the natural world.[26] Hegel's philosophy of nature, on this view, appears to have more in common with Kant's philosophy of science than Schelling's speculative physics.

It should be clear by now that I do not share this reading. Hegel, on my interpretation, is far closer to Schelling than the above paragraph suggests.[27] To be sure, Hegel sees himself as pursuing a profoundly different project than Schelling, but the reason for this self-conception must be made clear: first and foremost, it is Schelling's methodology which Hegel explicitly opposes, i.e., the way Schelling seeks to present his ontology of nature. From a Hegelian perspective, Schelling's method of intellectual intuition, his use of analogies, and his general disregard for specifying the logical development of nature amounts to a failure on Schelling's part to think immanently, i.e., to allow nature's ontological determinations to show themselves without smuggling in any preconceptions as to what those ontological determinations will be. To be sure, Hegel believes that this failure to think immanently leads Schelling, at times, to conceive of the absolute as improperly differentiated, and thus Hegel takes issue with aspects of Schellingian metaphysics as such. But Hegel is in no way critical of Schelling's intention to develop a speculative philosophy of nature, i.e., an investigation into the actual being of nature. We must keep in mind, then, that when Hegel insists upon elucidating the strictly *rational* relationship between the stages of his philosophy of nature, he is in no way limiting the philosopher's access to what nature *is*. On the contrary, these comments demonstrate precisely how Hegel conceives of the fundamental being of nature, namely, as an intrinsically rational (albeit self-alienated or 'negatively rational') domain, the being of which can only be properly grasped by allowing nature's intrinsic rationality to unfold dialectically in thought. In other words, according to Hegel, it is the rational structure of nature itself which must be considered in a properly speculative physics, and such a speculative thinking ought not to get bogged down in the sensuous history of nature lest it divert the philosopher's attention from nature's essential being.

There are at least two ways that Hegel's philosophy of nature can be understood to be a strictly rationalist project, with no concern for historical development, and yet fully ontological in its aims. I will call these ways of interpreting Hegel's philosophy of nature the 'emergentist' and 'organicist' interpretations. Both interpretations can be justified on the basis of textual evidence in the *Encyclopaedia*. The emergentist view, however, is both more convincing with respect to Hegel's claims about the ontological status of logical categories and more compelling as a nature-philosophical perspective. For these reasons, I defend the emergentist interpretation against what I am calling organicism.

On both the emergentist and organicist interpretations, Hegel's philosophy of nature progresses rationally from one stage to another, and this rational derivation of stages presents us with the fundamental structure of the natural world as it is in itself. The fundamental difference between these interpretations lies in the ontological priority attributed to various features of nature. On the organicist interpretation of Hegel, nature is a self-organising totality rightly understood as analogous to the organism described at the end of the philosophy of nature in the section entitled 'organics'. According to this view, Hegel begins with the most abstract forms of nature and shows that they imply successively more concrete forms. The philosophy of nature thus begins with a consideration of sheer matter-in-motion in order to show that this mechanical realm proves to be an abstraction from a more ontologically robust natural world involving the kind of self-development for which a speculative mechanics cannot account. On this view, the philosophy of nature works its way through a gradual, rational progression until it finally becomes apparent that the inorganic, selfless stages of nature had *presupposed* an organic ontological framework all along.

It follows from this that the only sense in which nature can be said to be 'mechanical' or 'chemical', on the organicist interpretation, is insofar as natural phenomena are *misunderstood* as being distinct from the organic *unity* of nature. This does not mean that the organicist denies any explanatory power to mechanist or physicalist ways of conceiving of nature. But it does mean that, from the organicist's point of view, natural phenomena are abstracted away from their *true* being if they are not recognised as part of a *whole*, i.e., a self-organising, living, and free nature within which abstract phenomena have their place *as* mechanical, chemical, and so on. It is important to recognise that, on this view, natural phenomena such as mechanical motion are possible only because nature is always already a self-determining organism in which certain 'parts' can be seen—from a limited perspective—to interact mechanically.

I want to reiterate here that one can make a compelling argument for reading Hegel in this manner. But I believe this interpretation misses out on the ontological integrity retained by the more abstract stages of nature and, related to this, the view inverts the ontological dependence of concrete stages upon abstract stages. Moreover, by conceiving of life as paradigmatic of nature *as such*, the organicist interpretation tends to see the whole of nature as preceding its abstract parts—much like the living thing is more fundamental, ontologically, than its organs—and this, I take it, isn't how Hegel sees things. As I will argue below, the emergentist interpretation of Hegel does not only see the abstract and inorganic features of nature as having ontological priority and thus conditioning organic life; it also sees these features as conditioning nature's wholeness. For the time

being, however, I will bracket issues regarding nature's wholeness and focus on the relationship between the inorganic and organic features of nature.

Čapek's paper, 'Hegel and the Organic View of Nature', helps to shed some light on the relation between the organic and inorganic as conceived of by the organicist. According to Čapek, the question with which the organicist grapples is how to understand the being of inorganic matter, and the organicist answer to this question is that the inorganic should be understood as 'a very rudimentary form of life or proto-life'.[28] Thus, unlike the mechanist, who must explain life as 'a peculiarly complex case of lifelessness',[29] the organicist need only explain what appears to be other than life. Although largely critical of Hegel, Čapek sees this 'organic view of nature' as a promising feature of his system. As I see it, Hegel is neither an organicist in this sense nor is such a view promising for the philosophy of nature more generally. In fact, Hegel's distinctive views regarding the relationship between the organic and inorganic go a long way in pointing out the limits of this organicist perspective.

If 'mechanism' and 'organicism' are the only two options for a philosophy of nature, then surely Hegel is an organicist. Inorganic nature is, in an important sense for Hegel, proto-organic. But the 'organic view of nature' secures the integrity of the organic at the expense of the integrity of the inorganic and in so doing misinterprets 'life' as fundamental. Indeed, Čapek describes the organic view of nature as holding that 'life is the *primary* category.'[30] Hence, the organicist only asks the question as to how inorganic nature is possible and does not stop to ask how life is possible. As I see it, Hegel's philosophy of nature presents a third option, beyond mechanism and organicism. Put simply: on Hegel's view, mechanical nature makes necessary organic nature, or, as Hegel says, life has its '*condition* in inorganic nature'.[31] In this way, Hegel is not opposed to mechanism *per se* (as is the organicist), but only to the mechanist philosopher who fails to recognise within mechanical nature the ontological source of more complex and self-determining forms of nature. But one cannot come to this realisation if one simply *begins* with life, as does the organicist. Indeed, as soon as one takes life to be 'the *primary* category' of the philosophy of nature, one has ruled out from the start the possibility of deriving the necessity of organic life from the primary manifestation of sheer reason, i.e., inorganic nature, in which the Idea is most estranged from itself and freedom is most lacking. Hegel's distinctive idea is that nature is utterly inorganic, selfless being that *achieves* organic selfhood through the activity—still strictly logical—of self-sublation: 'In nature life appears as the *highest* stage, a stage that nature's externality *attains* by withdrawing into itself and sublating itself in subjectivity.'[32] The organicist interpretation of Hegel's philosophy of nature simply cannot account for this achievement of organic selfhood.

Just how inorganic nature sublates itself and leads to the emergence of various forms of subjectivity will be covered in the following two chapters. Here, I want to focus on how the emergentist reading generally differs from the organicist reading. On the emergentist view, the 'lower' stages of nature retain their ontological integrity and are, therefore, irreducible to the higher forms that come later. Moreover, these 'lower' stages are not only ontologically distinct from the higher or more concrete forms of nature, but they are the forms which necessitate that there *be* more concrete, and, indeed, organic forms of nature.

This latter claim of mine is certainly the more contentious of the two and so I will consider it first. The idea I am defending is that Hegel's logical philosophy of nature describes the ontological dependence of more complex stages of nature upon more simple stages. This should not be understood as a claim regarding the *physical* dependence of certain phenomena upon other phenomena. Of course, to a contemporary naturalist, distinguishing between ontological and physical dependence is outrageous, since it implies a non-physicalist ontology. But Hegel is an idealist precisely because he interprets being as *Idea*—or reason—and in doing so, he can ascribe relations of ontological dependence to various features of nature without implying that such features of nature involve any kind of physical dependence. Thus, Hegel's philosophy of nature can posit the ontological dependence of light upon gravitational motion without making any claims as to the physical dependence of light upon gravity: although it is the being of gravity that *necessitates* the existence of light, light is not physically dependent upon gravity as an empirical matter. This is closely related to the fact that, even on the emergentist interpretation of Hegel, particular forms of nature do not emerge from other forms in time. This would be to mistake logical emergence for natural-historical emergence, and as I have already argued, Hegel is in no way interested in the latter. Nevertheless, if we understand logical emergence to be disclosive of ontological relations, as Hegel seems to think, then we should understand the logical emergence of light from gravitational motion to describe a relation of ontological dependence.

Now, in order for the abstract stages of nature to necessitate more complex stages, the abstract stages must retain their ontological integrity. And this means that such determinations must not only have *real being* (Hegel's logic of nature is an ontology of nature), but such real being must actually be abstract and inorganic. As Hegel remarks, 'it is characteristic of Nature to … let an abstract, separate moment exist independently.'[33] In other words, abstract determinations of nature *really exist*, for Hegel, and they do not just exist as *proto*-organic. If this were the case, then Hegel would have very little to say about the wealth of natural phenomena he discusses in his philosophy of nature (e.g., thrust, pressure, magnetism,

sound, heat, crystallisation, colour). To see in these features of nature a mere wash of 'proto-life' is to reduce the ontological specificity of nature's stages to their quasi-organic features and thereby strip each stage of its relative autonomy.

My opposition to the organicist interpretation should not be understood as a denial that Hegel understands matter to be proto-organic. On the contrary, as I will go on to argue in the following chapter, sheer mechanical motion shows the first signs of self-determining freedom in nature, prior to the emergence of self-determining organisms, and in this way, the mechanical realm is certainly proto-organic. But one risks obscuring the ontological distinctness of inorganic nature if it is exclusively understood as an anticipation of life. As Kreines has argued, emphasising Hegel's conception of nature as a system of stages is helpful in combating the 'organic monist' interpretation of Hegel, since it is this system of stages that presents 'the whole of reality [as] structured into different "levels" '.[34] Indeed, the rational *stratification* of nature is precisely what ensures the ontological integrity—and yet interconnectedness—of nature's fundamental features.

On my view, the organicist interpretation stems, in part, from a certain reading of Hegel's identification of the higher stages of reality as concrete and the lower stages as abstract. From the organicist perspective, abstract stages are abstract insofar as they are abstractions *from* the concrete determinacy of the organic. I think this is wrong and that we should understand the relationship between the 'abstract' and 'concrete' stages of Hegel's system otherwise. Any given stage of Hegel's system is 'abstract' so long as it *necessitates* further ontological determinations, which it cannot, according to its own explicit logic, express. For example, mechanical nature simply cannot express the qualitative determinacy of light or the elements, but it is the *being* of mechanical nature that requires nature to express itself *as* qualitatively distinct. In this case and throughout Hegel's system, abstract determinations necessitate concrete determinations.

If we interpret the abstractness of the mechanical stages of nature as abstractions *from* an organic, concrete totality, we miss out on Hegel's unique conception of the great chain of being, i.e., a chain that is expressed in reality 'from the bottom up'. As I suggested in the introduction to this book, Hegel's *Realphilosophie* describes an ontological movement akin to an inversion of Neoplatonist emanation. For Hegel, the stages in which the Idea is most depleted in power *raise themselves* to higher stages until, ultimately, the Idea achieves its unity-with-self in spiritual freedom.[35] Abstract features of nature are *real*, for Hegel, and they are the *reason* for there being less abstract features of nature.[36] *Pace* the organicist, then, it seems to me that mechanism *must* play a role in explaining some natural phenomena as they are in themselves. If this were not the case, then nature's *Stufenfolge*, as presented in the *Encyclopaedia*, would be

exclusively heuristic, allowing the philosopher to see, as one does in the 1807 *Phenomenology*, the *inadequacy* of various ways of understanding nature before finally arriving at the true standpoint of nature-philosophical science with speculative biology (the 'organics'). But Hegel's philosophy of nature is, unlike the *Phenomenology*, part of his ontology, and thus every stage of the philosophy of nature must be read as an *actual stage* of nature as it *really is*.

Up to this point, I have tried to distinguish an emergentist reading of Hegel's philosophy of nature from an organicist reading with reference to the relationship between the more abstract, inorganic stages of nature and the more concrete, organic stages. I have suggested that the former reading rightly focuses on the dependence of life upon the inorganic. One reason that Hegel is understood—wrongly in my view—to prioritise life, is that he understands nature *as a whole* to be a self-organising system. The organicist interpretation therefore does not only downplay the dependence of life upon the non-living, but it also tends to see nature's unity as somehow preceding its parts. Indeed, organicist readings of Hegel often interpret nature to be, first and foremost, a self-organising whole, even if this supposedly original wholeness is only discovered systematically through the immanent self-sublation of nature's inorganic stages. There is no question that, for Hegel, there is some truth to the idea that 'nature is, in itself, a living Whole.'[37] But Hegel's view is misconstrued when he is taken to conceive of nature as a whole first and foremost, as though the abstract features of nature acquire their ontological determinacy from the self-organising activity of nature's overall structure.

When I claim that, for the organicist, nature is 'first and foremost' a 'living Whole', I do not mean to restrict the field of 'organicist interpretations' to those commentators who take Hegel to *presuppose* that nature is a whole. On the strongest organicist reading of Hegel, we *learn* that nature is a whole only through the dialectic of nature presented in the *Encyclopaedia*. But in doing so, we come to discover that the abstract stages of nature with which the philosophy of nature begins are granted their ontological sense by their place in nature's overall system, i.e., within nature's organic unity.[38] It is in this sense that the organicist interpretation, even at its strongest, takes nature's wholeness to precede its abstract stages. The key question, then, is not whether Hegel *presupposes* organic life as the essential framework for understanding nature, but whether he understands nature to *be* fundamentally whole and only *derivatively* mechanical, chemical, and so on. The question is therefore one of ontological priority: is nature's wholeness 'there from the start' (even if this fact only comes to light through a presuppositionless logic of nature) or is nature's wholeness *achieved*—logically but therefore ontologically—once the system of stages has reached its rational apex in animal life?

On my view, the latter is not only a more compelling conception of nature, but it draws out key insights of Hegel's philosophy of nature that are lost on the organicist interpretation. I take Kenneth Westphal to be making this point in his own defence of an emergentist interpretation of Hegel: 'To say that Hegel is an emergentist is to reject strongly holistic interpretations of Hegel's views, according to which "the whole" has ontological priority over its parts and determines their characteristics, or at least, more so than vice versa.'[39] As Westphal acknowledges, Hegel is certainly a holist of some kind. Nature is a *system*, and, moreover, it is the manifestation of the absolute Idea; thus nature's features must certainly be related to one another in some intrinsic sense, necessitating some kind of holism. But Hegel's holism is exaggerated when the wholeness of nature is taken to be more fundamental than its parts, as a natural 'self' that makes gravitational, magnetic, and chemical phenomena possible. What is necessary, then, is a conception of nature's wholeness in which such wholeness is understood to be consequent upon nature's more abstract parts.

Yet again, Hegel's conception of nature as a system of stages is helpful. What makes nature a 'whole' for Hegel? It is not that nature is an organic *individual* that internalises that which it finds in its environment and that returns to itself as a living process (as in animal life); nature is neither an individual nor does it exist within an environment. Nature is a whole, rather, because it is a rationally progressive system of interconnected stages. One might see such a conception of nature's total structure as 'organicist' insofar as it emphasises the ultimate unity of nature's various features. Indeed, this emphasis on nature's unity allows Hegel to reject any mechanistic conception of nature's total structure—as if there were no inner rational unity between matter-in-motion, chemical processes, and life. But we must take note that mechanism, as regards nature's total structure, is misguided for a very particular reason: a mechanistic understanding of nature's total structure takes every feature of nature to be contingently related to every other feature. What makes nature a whole for Hegel is that there exist rationally necessary relationships between each of nature's ontologically distinct stages. Hegel's fundamental opposition to mechanism regarding nature's totality, therefore, is not that it fails to comprehend nature as some living thing, but that it fails to see the rational interconnectedness of the various—that is, living *and non-living*, physical *and mechanical*—stages of nature. And this means that the wholeness of nature must be understood as dependent upon the abstract stages of nature which necessitate that there *be* other stages of nature and, ultimately, a 'nature' in which all stages are unified by way of the immanent logic that connects them to one another.[40]

Abstract stages of nature are thus not abstracted away from a concrete whole; such stages rather make that whole possible through their very

being. The differences that make up nature's system of stages are what allows that system to *be* a unified system at all, since genuine unity requires ontological differences that can be united through their distinctness. On the emergentist interpretation of Hegel, the whole does not precede its parts, but is made possible by those parts. Indeed, nature only *proves* to be a whole in the rational progress it makes through its ontologically distinct stages, and this progress towards wholeness is just as much an ontological feature of nature itself as it is a feature of our comprehension of nature's being. What comes to light, then, is that, on the emergentist interpretation, which emphasises nature's ontologically stratified character, the logic of inorganic nature is not only the condition of life, but equally conditions nature's wholeness.[41]

None of this is to say that Hegel privileges the inorganic or lacks interest in life. There is no question that Hegel is, as is Schelling, a 'philosopher of life' in an important sense. For life is a higher and more truthful expression of the Idea than the non-living. But that life is determined as *higher* in the system does not make it more *fundamental*. On the contrary, the higher and more truthful expressions of being, for Hegel, are always emergent from the lower and less truthful expressions of being.

And yet the absolute idealists are so often taken to be organicists. One reason they are interpreted as such is due to the practical aims of their systems. This is how Beiser describes the task of the philosophy of nature: 'If … it could be shown that nature were an organism, then it would be possible to make mind part of nature without embracing a crude materialism and determinism.'[42] And elsewhere Beiser writes:

> The great attraction of the organic paradigm [to philosophers at the turn of the nineteenth century] is that it seemed to uphold the unity and continuity of nature by explaining both the mental and the physical according to a single paradigm. It seemed to realize that long-sought ideal of all science since the seventeenth century: a non-reductivistic yet naturalistic explanation of life and the mind.[43]

On this view, Hegel and Schelling are seen as proponents of an 'organic concept of nature' because such a concept allows them to resolve a fundamental tension in our understanding of the world, a world which appears, on the one hand, mechanically deterministic, and on the other, inclusive of self-determining, moral individuals. The 'organic concept of nature', in other words, is meant to resolve Kant's third antinomy by conceiving of both nature and freedom in terms of natural self-development, or life. On this view, 'life' is the key nature-philosophical concept because it allows one to understand nature to be self-determining and spiritual freedom to be natural.

Beiser is no doubt correct to see in Hegel, as well as in Schelling, a motivation to understand nature itself in terms of freedom, such that human freedom could be shown to belong in the world. Moreover, Beiser is right to focus upon life as playing an essential role in unifying nature and spirit. But by making life the 'paradigm' for understanding both inorganic nature and spirit, the difference between the non-living and life, as well as that between life and spirit, are suggested to be mere differences of degree.[44] The problem with this interpretation, then, is that life unifies nature and spirit by *levelling down* the stages of reality into a relatively homogenous 'living whole'.

As I see it, there is a second way of understanding life as unifying nature and spirit, and this is by conceiving of the nature-spirit identity as being achieved through life. On the emergentist interpretation of Hegel, life unifies inorganic and spiritual reality by playing the role of their necessary mediation. In other words, inorganic nature passes *through* life in order to make spiritual freedom possible. The identity between nature and spirit, then, is not the living totality from which both nature and spirit are granted their ontological sense; the nature-spirit identity is a processual identity, an identity made possible through an activity of differentiation.

Because this activity of differentiation is propelled by active *negation*, the consequent identity of nature and spirit involves robust qualitative difference. Thus, the stages of nature that culminate in organic life and the liberation of spirit are qualitatively distinct stages of realty. In Beiser's view, 'Hegel never understood spirit as something existing above and beyond nature but as the highest organization and development of its powers.'[45] While it is true that Hegel refuses the idea that spirit is something 'above and beyond' nature, I think Beiser's conception of the nature-spirit relation overlooks the qualitative difference inherent in this relation. Hegel understands spirit to involve a liberation *from* nature, an ontological *negation* of nature which, while made possible and even necessitated *by* nature, cannot be said to proceed from nature as a higher organisation of nature's *powers*. Such a description of the nature-spirit relation ignores Hegel's unique account of the *impotence* of nature and the self-negating negativity that is spiritual freedom, both of which, from a Hegelian perspective, ensure the qualitative distinctness of nature and spirit.

With these remarks, it becomes apparent that the significance of the emergentist model I am endorsing extends beyond the inorganic-organic relationship and into the relationship between nature and spirit. To understand inorganic matter, organic life, and spiritual freedom as merely quantitatively distinct amounts to a reductionism that Hegel fought against tooth and nail. I agree with Thomas Posch, then, who claims that Hegel's version of the *scala naturae* constitutes an 'antireductionism' that is 'one

of the chief strengths of Hegel's philosophy of nature—and moreover of his system in general.'[46]

In contemporary philosophy, when reductionism is rejected it is usually due to the fact that it threatens to gloss over the ontological specificity of life and freedom.[47] In the early nineteenth century, Schelling and Hegel wanted to avoid a similar threat posed by mechanistic conceptions of nature. For this reason, the organicist rightly interprets Schelling and Hegel as non-reductive naturalists. But Schelling and Hegel were also opposed to reducing the ontological specificity of inorganic phenomena to life or spirit.[48] Indeed, genuine anti-reductionism cuts both ways: the higher ontological determinations, such as life and spirit, are distinct and must not be reduced to inorganic natural processes (nor, as we will see, should spirit be reduced to life); but likewise inorganic nature must not be mistaken for merely illusory being hiding away the truth of nature. Inorganic nature is not organic, for Hegel, and, as I will argue below, spirit is not natural. What makes this robust anti-reductionism especially compelling, however, is that it is premised upon the ontological continuity of the distinct stages of nature and spirit. The difference between inorganic matter and life, for example, in fact unites these two regions of nature, since the ontological specificity of life emerges from the logic of inorganic matter.

## Speculative Physics and Empirical Physics

As the above makes explicit, Hegel's idea that nature is rationally stratified is essential to his philosophical vision. It is this attention to nature's rational stratification which allows him to distinguish his philosophical or speculative approach to nature from what we ordinarily take to be our primary theoretical access to nature, namely, natural science or what Hegel calls 'empirical physics'. In this section, I want to consider how Hegel understands the relationship between speculative physics and the natural sciences, the latter of which he takes to be improperly speculative or theoretical. This will allow me to conclude my prefatory remarks about the aims and methodology of Hegel's philosophy of nature and turn, in Chapters 6 and 7, to the immanent logic of nature as he understands it.

First, it is important to recognise that although the philosophy of nature is a rationalist enterprise, it does not have exclusive purchase upon a thinking relationship to the natural world. On the contrary, Hegel also understands empirical physics to be a 'thinking apprehension of nature'.[49] Thus, according to Hegel, empirical physics 'contains much more thought than it admits and is aware of […] Physics and the Philosophy of Nature, therefore, are not distinguished from each other as perception and thought, but only by *the kind* and *manner of their thought*.'[50]

That speculative and empirical physics are engaged in quite different forms of thought, however, makes all the difference. Whereas empirical physics simply utilises concepts to understand various natural phenomena under empirical observation, speculative physics considers these concepts explicitly and without reference to experience.[51] This explicit consideration of concepts requires the philosophy of nature, as we have already seen, to be presented as an immanent unfolding of conceptual stages that are rationally connected to one another. Since Hegel grants consciousness-independent reality to concepts, we can see the following: by attending to the necessary interconnections *between* all of the concepts that are utilised in our understanding of nature, speculative physics is able to demonstrate the immanent unity of all natural phenomena. According to Hegel, this makes the nature-philosophical 'thinking apprehension of nature' far more rational than the thinking at work in empirical physics. For the latter remains inattentive to the immanent movement of *logos* in nature, reflecting upon nature without considering the logical structures of and relations between the concepts employed in this reflection. Perhaps somewhat surprisingly, then, the empirical scientist whose thought is directed explicitly to *experience* of the natural world is much further than the speculative philosopher is from grasping the *being* of nature.

Getting to the heart of nature, then, doesn't seem to involve any experience of the natural world. Indeed, it looks as though speculative physics operates quite independently of empirical physics and the latter's experiential engagement with nature. For speculative physics sinks into the rational core of the natural world and allows its determinations to unfold logically as a system of stages. In this way, while Hegel acknowledges the limited form of rationality at work in the natural sciences, he nevertheless insists upon the self-sufficiency of the philosophy of nature as a strictly rational derivation of nature's fundamental features. This is what Hegel means when he says that the philosophy of nature, unlike empirical physics, considers nature 'in its own immanent necessity in accordance with the self-determination of the Notion'.[52]

Importantly, however, this is by no means Hegel's last word on the relationship between philosophy and the natural sciences. At times, Hegel describes the philosophy of nature as being *dependent* upon the discoveries of the empirical sciences. In fact, in the Remark to the very paragraph in which Hegel defines the philosophy of nature as proceeding through the sheer 'self-determination of the Notion', we find the following: 'Not only must philosophy be in agreement with our empirical knowledge of Nature, but the *origin* [*Entstehung*] and *formation* [*Bildung*] of the Philosophy of Nature presupposes and is conditioned by empirical physics.'[53]

There is an apparent tension therefore in Hegel's account of the relationship between the philosophy of nature and the empirical sciences. On the

one hand, the philosophy of nature is meant to be an independent, rationalist derivation of the fundamental stages of nature. On the other hand, this philosophy must be in *agreement* with the empirical sciences and even draw upon the discoveries of those sciences, making them philosophy's presupposition (*Voraussetzung*) and condition (*Bedingung*) of possibility. If the philosophy of nature is dependent upon empirical research in this way, it doesn't look as though philosophy is the unconditioned, rational science Hegel claims it is.

Sorting out Hegel's views about the relationship between philosophy and empirical science is one of the most contentious areas in scholarship on Hegel's philosophy of nature. Various interpretations have been proposed to resolve this apparent tension. As I see it, however, there really isn't much ambiguity here. Contrary to what Gerd Buchdahl claims, namely, that 'Hegel speaks and acts with a divided voice' regarding this matter,[54] I believe Hegel is in fact both clear and consistent in his understanding of the relationship between his philosophy of nature and the empirical sciences. Just after his oft-quoted remark about philosophy presupposing and being conditioned by natural science, Hegel qualifies this claim:

> The course of a [philosophical] science's origin and the preliminaries of its construction [*Vorarbeiten*] are one thing, while the [philosophical] science itself is another. In the latter, the former can no longer appear as its foundation [*Grundlage*]; here the foundation must be the necessity of the Notion.[55]

What Hegel seems to be saying is that the philosophy of nature must draw upon empirical knowledge for its own development, but this empirical foundation has no significance whatsoever with regard to the system *as such*, i.e., the system presented in philosophy as the strictly logical development of nature's necessary stages.

In an addition to § 246, Hegel is even more explicit about the method involved in the philosophy of nature:[56]

> The Philosophy of Nature takes up the material which physics has prepared for it empirically, at the point to which physics has brought it, and reconstitutes it, so that experience is not its final warrant and base. Physics must therefore work into the hands of philosophy, in order that the latter may translate into the Notion the abstract universal transmitted to it, by showing how this universal, as an intrinsically necessary whole, proceeds from the Notion.[57]

And in the Introduction to the *Encyclopaedia Logic*, to which Hegel refers the reader, we find the following:

> Thus, philosophy does owe its development to the empirical sciences, but it gives to their content the fully essential shape of the *freedom* of thinking (or of what is a priori) as well as the *validation* of *necessity* (instead of the content being warranted because it is simply found to be present, and because it is a fact of experience).[58]

In these passages, it becomes apparent that Hegel's view depends upon an important distinction between the manner in which we philosophers first come to be acquainted with the material or content of the logic of nature and that logic *itself* as an entirely self-sufficient dialectic. Insofar as human beings have achieved a certain understanding about the world through the modern natural sciences, those sciences provide the philosopher of nature with the data needed to uncover nature's inner logic. In this way, the philosophical system of nature is dependent in an important sense upon empirical knowledge, for this empirical knowledge was necessary for the philosopher's system to be developed in the first place. It would not have been possible, for example, for Hegel to articulate the logic of chemistry as it is presented in the philosophy of nature had Hegel died before the chemical revolution at the turn of the century.[59] That Hegel lived through a major period of scientific discovery made it possible for him to include novel ideas about chemical affinity within his system of nature.[60] This does not mean, however, that the system of nature *as such*, i.e., the inner logic of nature itself—the logic revealed in the *philosophy* of nature—is dependent upon empirical knowledge. On the contrary, the logic that is presented in the *Encyclopaedia* is, from a systematic perspective, a wholly self-sufficient progression of nature's rationally necessary stages: it would be the progression that it *is* whether or not Hegel, or anyone else for that matter, came along to discover it—relying, as they must, upon the empirical sciences. The logic of chemistry found in the philosophy of nature, therefore, stands on its own as a rational derivation of logical-natural determinations that justify *themselves* as necessary features of the natural world.[61]

To put this another way: Hegel depends upon the natural sciences for a sufficient understanding of the natural world and *from* this understanding is first in a position to uncover the logical structures at work throughout the whole of nature. It is this latter system of structures which turns out to be wholly self-sufficient, i.e., an immanent rational development in the 'strong a priori' sense defended by Alison Stone, despite the fact that Hegel needed to be acquainted with the natural sciences in order to initially uncover nature's inner logic.[62] Where Stone goes wrong, in my opinion, is in her claim that Hegel 'does, indeed, use a priori reasoning to construct his basic theory of nature.'[63] Thus, while I agree with Stone that Hegel's ontology of nature should be seen as strictly rationalist and self-justificatory, its *construction* is dependent upon the empirical knowledge

of Hegel's day.[64] But this point about construction does not make Hegel any less committed to the view that there is rational necessity linking one stage to another. In fact, as Cinzia Ferrini argues, it is precisely in demonstrating the rational necessity of nature's forms that the philosophy of nature is distinguished from empirical research.[65] The central tenet of Hegel's philosophy of nature is that there is a rationally necessary progression leading from the most abstract determinations of nature to its most concrete determinations. And this means that, as we work through nature's *Stufenfolge*, we move to successively concrete stages through the *logic* of former stages. That Hegel relied upon the natural sciences when uncovering this rational progression for the first time does not make that rational progression any less self-sufficient—so long as that rational progression can be shown to proceed immanently, i.e., without reference to empirical justification.[66]

For the rational development presented in the philosophy of nature to be self-sufficient, each shift from one logical-natural determination to another must be necessitated in Hegel's distinctive sense. For instance, the transition from the chemical process to the geological process will depend upon the appearance of a *way of being* within the logic of the chemical process that lights up as logically possible, but that the chemical process as such, given its own logic, cannot exhibit. This means that a further logical-natural determination—one that exhibits the implicit truth of the chemical process—*must be*. The process that makes intelligible that *new thing that must be*—in this case, the logical explication of the geological process from out of the chemical process—this is self-sufficient; one can follow it in thought as a strictly rational development. Such a strictly rational development is, by definition, independent of empirical research in chemistry and geology, even if the philosopher must first become familiar with those sciences in order to subsequently grasp the logic.

The point Hegel is making about nature-philosophical methodology recalls the metaphysical relationship between dependence and freedom explored in Chapter 3 above. Schelling had made it very clear that the dependence of one thing upon another does not negate the independence of that which is ontologically dependent. On the contrary, something must first *be* in order for it to determine itself; and since things do not bring themselves into existence, dependence is a necessary condition for independence or self-determination, even if only in the sense that a thing depends on something else for its generation. Hegel is now helping us to see that this metaphysical principle of dependent independence may also apply to the philosophy of nature as a discipline. This branch of philosophical science relies upon other forms of knowledge for its existence, but that does not in any way diminish the manner in which the philosophy of

nature is self-determining or autonomous. The logical development that proceeds from one stage of nature to another is a strictly rational development, a development that is immanent to nature itself and therefore necessarily independent of the conditions that first allow the philosopher the opportunity to grasp that logical development. Philosophy of nature, it is true, 'needs experience in order to be'; 'no contemporary philosophy of nature could have existed without physics'; and this means that, from a certain perspective, philosophical knowledge regarding the natural world is the result of some other form of knowing.[67] But it is misguided to assume that something's being a result makes it less independent or free. Just as 'man determines himself and yet is born', so too is the philosophy of nature an autonomous discipline insofar as it rationally justifies its own claims, while also depending upon empirical science for its existence.[68]

In my view, this makes it clear that empirical science is only the presupposition and condition for philosophy in terms of the latter's initial construction or, better put, insofar as the empirical sciences provide Hegel with the knowledge necessary to work out the logical progression that makes up nature's system of stages. This interpretation also goes some way in explaining Hegel's claim that philosophy must 'be in agreement with our empirical knowledge of Nature'.[69] Since the philosophy of nature is first developed by drawing upon the empirical sciences, then it will surely 'agree' with empirical science. But more than this: nature's own conceptual structure is made visible by the work of the empirical scientist—despite the fact that the empirical scientist has no resources to reflect upon the that conceptual structure *as such*. Therefore, on Hegel's understanding, a speculative philosophy of nature will *necessarily* be in agreement with empirical science, since the rational *truth* of nature shows itself in both intellectual endeavours, albeit in an obscure and relatively unintelligible form in the empirical-scientific procedure. The discoveries made by the sciences are *rational discoveries*, discoveries made *by* rational beings *about* the rational world. This is why Hegel's philosophy of nature is not only unopposed to empirical science, but it engages with science, which 'contain[s] the invitation for thinking' by 'prepar[ing] the material for philosophy by finding universal determinations, genera, and laws.'[70]

I believe one reason that this interpretation of Hegel has not been taken up with frequency is because it limits the possibility of defending his philosophical perspective as somehow 'viable' in our contemporary age. Indeed, with the changes undergone in the natural sciences in the nineteenth and twentieth centuries, Hegel's philosophy of nature is at risk of being seen as antiquated if its relationship to empirical science is the one I propose above. As I see it, commentators who defend an a posteriori reading of Hegel and even some who defend a rationalist reading do so, in part, with the intention of saving his philosophy of nature from becoming archaic as

the natural sciences continue to develop a worldview that Hegel couldn't have dreamed of, let alone presented in rigorous systematic detail.

Petry, for example, understands the philosophy of nature as a systematic task of epistemological reconstruction.[71] On this interpretation, the philosopher of nature attends to the theories developed in the natural sciences and simply develops a rational reconstruction of that empirical knowledge. It is quite obvious why this is an attractive view. If the 'rationality' Hegel is concerned with is *exclusively* the rationality at work in the natural sciences, then the philosophy of nature is potentially revisable in light of developments in the sciences. In support of such a reading, when Hegel remarks that 'the dignity of [philosophical] science must not be held to consist in the comprehension and explanation of all the multiplicity of forms in Nature' and that 'we must be content with what we can, in fact, comprehend at present', it looks as though he is fully open to the idea that the philosophy of nature might be substantially revised in the future.[72] Indeed, Hegel goes on to say that 'there is plenty that cannot be comprehended *yet*',[73] implying that a day may come when the empirical sciences discover more about the natural world, and that this could, in turn, be fed into the rational reconstruction process that is his philosophy of nature.

On my view, this interpretation simply doesn't do justice to Hegel's rationalist ontology. It is absolutely central to Hegel's project that the philosophy of nature is to be read as a strictly rational derivation, and that the stages presented in this rational derivation have eternal, ontological significance. In other words, Hegel is not only interested in what human beings *think* about nature, but about nature *itself*; and, according to Hegel, the fundamental structure of nature does not *change*. It follows from this that, whatever his views on potential improvement to the philosophy of nature (more on this below), the *Encylopaedia* seeks to lay out the ontologically necessary determinations of nature and not merely the rational systematisation of empirical knowledge.

Although it is not always as explicit, some rationalist interpretations of Hegel—with which I am generally sympathetic—also run into problems in an attempt to make Hegel's philosophy of nature relevant today. Stone, for example, who rightly defends a rationalist reading of Hegel, makes the case that an a priori philosophy of nature allows the empirical sciences to discover novel things about the natural world while the philosophy of nature retains its disciplinary integrity. According to Stone, the philosophy of nature requires the empirical sciences for the exclusive purpose of 'fleshing out' the purely rational progression of the philosophy of nature.[74] The problem with this view is that it opens up the possibility that when Hegel is describing *logical* determinations of nature, he does not have in mind the logical determinations *of natural phenomena themselves*. Hence, Stone can say the following:

> As scientific knowledge develops, [Hegel's] reformulations of many scientific accounts will become implausible and so his rationale for including them in the *Philosophy of Nature* will disappear. The material that he includes could, in principle, be substituted for quite different material with no effect on his basic theory of nature.[75]

On Stone's 'strong a priori' interpretation, then, Hegel's philosophy of nature isn't so much about the rational structure of space, light, and life so much as it is about metaphysical features of nature, such as 'self-externality', 'pure identity-with-self', and 'reproduction-of-self' that may *or may not* correspond to the natural-scientific *Vorstellungen* of space, light, and life.[76] From this perspective, if it turns out that the empirical sciences develop a representation of organic life that is radically distinct from those representations we find in Hegel's *Encyclopaedia*—say, that the essence of life is understood without any reference to a self-organising whole—this doesn't affect Hegel's *metaphysical* claims about nature involving a certain self-reproductive 'subjectivity'; it just means this metaphysical 'subjectivity' or 'selfhood' might not map onto empirical representations of organic life after all. In this way, Stone's 'strong a priori' reading is supposed to secure the independence of Hegel's philosophical insights from the now outdated sciences with which Hegel was engaged.[77]

Thus, Stone, whose 'strong a priori' reading is in many respects the hermeneutic antithesis of Petry's 'systematisation of the sciences' interpretation, shares something fundamental in common with Petry. As I see it, the debate between these two perspectives unfolds as a result of their shared interest in making Hegel's system of nature (potentially) viable today.[78] And while I too want to champion a certain return to the principles of idealist philosophy of nature in contemporary metaphysics, there is an important sense in which the focus on justifying Hegel's philosophy of nature in relation to recent developments in the natural sciences obscures the relatively straightforward relationship Hegel understood there to be between his philosophy and the empirical sciences of his time. Again, on my reading, the empirical sciences make it possible for Hegel to uncover the strictly rational progression that nature is. What this means, of course, is that Hegel's system cannot simply be 'amended' over time, because Hegel believed that the sciences of his day provided philosophy with enough knowledge to understand the rational structure of the natural world in its totality. This does not mean that Hegel believed that the natural sciences would make no further progress in their understanding of nature after 1830. There is no doubt that Hegel thought the natural sciences would continue to shed light upon the structure of the natural world. But I take it that Hegel understood the future of natural-scientific work to be a further specification of empirical knowledge that had already been established by

natural-scientific theories, theories which wouldn't ever be 'overturned'. In other words, Hegel didn't predict that there would be major revolutions or 'paradigm shifts' in the sciences. Thus, any revisions required of Hegel's philosophy of nature would be relatively minor, comparable to the revisions Hegel felt were necessary to carry out between the first, second, and third editions of his *Encyclopaedia*.

Since Hegel's system takes the natural sciences of his day to be relatively well-informed about how nature *really is*—despite, of course, their inability to reflect on nature's total structure—one might think the critics of Hegel's philosophy of nature have been right all along, that Benedetto Croce was wise to declare it dead in the water.[79] But I believe this impulse to reject Hegel's philosophy of nature on account of its acceptance of the sciences of his day is motivated by a fundamental philosophical prejudice. This is the Baconian prejudice, prevalent in nearly every corner of intellectual life today, that our knowledge about the natural world must be grounded in empirical-scientific research, and that this knowledge should be understood to have accumulated in a relatively progressive historical fashion, such that older forms of knowledge are seen as necessarily immature and erroneous.[80] But to hold this view is to simply presuppose that past philosophical engagements with nature are intrinsically limited, that they will pale in comparison to recent theory that has at its disposal more empirical data. And it is possible that this is simply false. Is there no sense to the thought that some of the most penetrating investigations into *what nature is* are found in Plato and Aristotle? That the *Timaeus* and the *Physics* cannot be 'updated' to include reference to modern scientific thinking surely says nothing about their profundity. On my view, then, we should not shy away from Hegel's philosophy of nature simply because it cannot be refurbished with either a new rational progression (incorporating, for example, logics of quantum mechanics and genetic biology) or 'fleshed out' with new empirical data, just as we shouldn't shy away from the Platonic, Aristotelian, Cartesian, or Leibnizian philosophies of nature on account of their being historically situated. Instead, we should remain open to Hegel's vision of nature and the thought that his vision might provoke today.[81]

In the following two chapters, therefore, I want to closely follow the rational development Hegel says leads from mechanical motion to the logical emergence of life and spirit. Because Hegel insists upon the immanent rationality at work in this process, I take Hegel at his word and attempt to the best of my ability to make explicit the immanent logic he claims motivates the development of nature. I believe that in doing so we can not only better understand a most difficult part of Hegel's system, but we can begin to see how his philosophy of nature clears a path towards a far more promising conception of nature and its inner development than

might be expected for the simplistic reason that the empirical science of Hegel's day is no longer 'our science'.[82]

## Notes

1 The philosopher who, according to Hegel, first seeks to understand the nature of reason and thereby raises it to a philosophical concept is Heraclitus, whose thought he holds in the highest esteem. In Hegel's own words, 'There is no proposition of Heraclitus which I have not adopted in my Logic' (*W* 18: 320; *Lectures on the History of Philosophy: Volume I,* p. 279). Central to Hegel's appreciation for Heraclitus is the idea that *logos* is a principle of movement—an idea to which I return in Chapter 8 below, as this distinguishes Hegel from Schelling in a significant way. One thing that Heraclitus teaches us is that 'we are wrong in representing the speculative to be something existent only in thought or inwardly' (*W* 18: 335; *Lectures on the History of Philosophy: Volume I*, p. 291). Hence Heraclitus' insistence that we learn that 'all things are one' by 'listening not to me, but to the logos' (Heraclitus B50), i.e., not to the philosopher but to reason itself. According to Hegel, what is lacking in Heraclitus, despite his 'speculative depth' (*W* 18: 346; *Lectures on the History of Philosophy: Volume I*, p. 313), is an understanding of *logos* as ultimately coming to be at *rest* with itself *in* its very movement. Anaxagoras accomplishes what was lacking in Heraclitus: with the conception of *nous*, we find a principle that is what it *is* insofar as it remains at peace with itself in its activity, thereby prefiguring Aristotelian *energeia* and announcing, for the first time in world history (according to Hegel), that the becoming of being is essentially *mind* (nous), 'the simple, absolute essence of the world' (*W* 18: 380; *Lectures on the History of Philosophy: Volume I*, p. 329; see also *W* 3: 54; *Phenomenology*, p. 34). But as Hegel reminds us, for Anaxagoras, 'nous is … not a thinking existence from without which regulates the world; by such the meaning present to Anaxagoras would be quite destroyed and all its philosophic interest taken away' (*W* 18: 370; *Lectures on the History of Philosophy: Volume I*, p. 331). And thus 'we must not represent to ourselves subjective thought' (*W* 18: 382–383; *Lectures on the History of Philosophy: Volume I*, p. 331) when we seek to understand the nature of *nous* or thought *simpliciter*. Such remarks are not only helpful for driving home the point that Hegel is in good philosophical company when he conceives of reason, or the absolute Idea, as distinct from humanity; they also show that Hegel is inspired by an ancient way of thinking about what *is*, a way of thinking that is non-empiricist but is no less attentive to nature for that matter. For this reason, I disagree with J. Glenn Gray, who claims that 'Hegel, unlike many German historians who were to follow him, did not set too high a value on the contributions of the pre-Socratics' and that 'these early philosophers had after all, he concluded, accomplished little—except to furnish the material and a tradition for the greater thinkers who were to come after them' (*Hegel and Greek Thought* [New York: Harper & Row, 1968] p. 77). Daniel Berthold-Bond is helpful in elucidating the essential connection between Hegel and Heraclitus specifically. See Berthold-Bond, *Hegel's Grand Synthesis* (Albany: State University of New York, 1989), p. 72.

2 It is worth briefly commenting on the fact, however, that in certain respects—and despite his self-identification as an Aristotelian—Hegel does depart from ancient Greek metaphysics insofar as he conceives of humanity along explicitly Kantian and Christian lines, i.e., in terms of self-determining freedom and *spirit*. As Hegel remarks, spirit is 'the most sublime Notion and the one which belongs to the modern age and its religion' (*W* 3: 28; *Phenomenology*, p. 14), and Hegel's philosophical system—in spite of its similarity to ancient Greek metaphysics—is fundamentally a Christian system, in large part because of his conception of spirit. According to Hegel, ancient Greek thought simply remains too abstract to conceive of the ontological specificity of spirit, which can only be grasped concretely once it *becomes* concrete in history. Nevertheless, according to Hegel, ancient Greek metaphysics already indicates the direction in which history is headed with respect to humanity's understanding of itself in terms of spirit. Cf. Ferrarin, *Hegel and Aristotle*, p. 145. For a discussion of the Christian origins of Hegel's conception of spirit, see Alan M. Olson, *Hegel and the Spirit: Philosophy as Pneumatology* (Princeton: Princeton University Press, 1992).

3 *W* 9: Addition to § 246, 23; *Philosophy of Nature*, p. 13.

4 *W* 9: Addition to § 247, 25; *Philosophy of Nature*, p. 14. Translation modified.

5 *W* 10: Addition to § 381, 24; *Philosophy of Mind*, p. 14. Translation modified. Another damning instance is found in the addition that concludes the philosophy of nature: 'The aim of these lectures has been to give a picture of nature in order to subdue this Proteus: to find in this externality only the mirror of ourselves, to see in nature a free reflex of spirit.' The key to my interpretation concerns how Hegel unpacks this thought further, which again, he does in theological as opposed to philosophical language. Hegel continues: '[The aim of these lectures has been] to know God, *not* in the contemplation of him as *spirit, but in this his immediate existence*', an immediacy which *is not spirit* and is, as immediate, logically prior to spirit. *W* 9: Addition to § 376, 539; *Philosophy of Nature*, p. 445. Emphasis modified.

6 *W* 9: Addition to § 252, 38; *Philosophy of Nature*, p. 26.

7 As Hegel says in the Preface to the *Phenomenology*: 'Only this self-*restoring* sameness, or this reflection in otherness within itself—not an *original* or *immediate* unity as such—is the True.' *W* 3: 23; *Phenomenology*, p. 10.

8 *W* 8: Remark to § 8, 52; *Encyclopaedia Logic*, p. 32.

9 John Burbidge, *Real Process: How Logic and Chemistry Combine in Hegel's Philosophy of Nature* (Toronto: University of Toronto Press, 1996), p. 24.

10 A sign of this harm is that even Hegel's defenders—many of whom, ironically, read Hegel as more 'naturalistic' than I do—conflate the absolute Idea with spirit. For example, Willem deVries disregards their difference in his interpretation of the Addition to § 247, where we learn that nature is 'the Idea in the form of otherness'. He reasons as follows:

> [Nature] must, according to Hegel, be conceived of as pointing to spirit, working toward its own fulfilment in the complete actuality of spirit. Nature as a whole is itself a spiritual phenomenon; the existence and structure of nature cannot be understood solely on natural principles but must be referred

to spirit. In that the very being of nature is realized only through spirit, nature is self-external.

Willem A. deVries, *Hegel's Theory of Mental Activity: An Introduction to Theoretical Spirit* (Ithaca: Cornell University Press, 1988), p. 47.

11 Krell, *Contagion*, p. 120.

12 By 'objective idealism' here, I mean to refer to the idealism that begins with 'objective subject-object identity' as discussed at the beginning of Chapter 4 above, i.e., the objective idealism that both Schelling and Hegel embrace under the banner of 'absolute idealism'.

13 *W* 9: Addition to § 247, 25; *Philosophy of Nature*, p. 14.

14 *W* 9: Addition to § 247, p. 25; *Philosophy of Nature*, p. 15.

15 *W* 9: § 249, 31; *Philosophy of Nature*, p. 20. Emphasis modified.

16 *W* 9: Remark to § 249, 31–32; *Philosophy of Nature*, p. 20.

17 Hegel writes:

> Even *if* the earth was once in a state where it had no living things but only the chemical process, and so on, yet the moment the lightning of life strikes into matter, at once there is present a determinate, complete creature, as Minerva fully armed springs forth from the head of Jupiter. The Mosaic story of creation is still the best in its quite naïve statement that on this day plants came into being, on another day the animals, and on another day man. Man has not developed himself out of the animal, nor the animal out of the plant; each is at a single stroke what it is.
>
> (*W* 9: Addition to § 339, 349, *Philosophy of Nature*, p. 284)

It is worth noting here that Hegel is *most* unreceptive to the idea that the *broadest* categories of living things develop into one another, i.e., plants, animals, and humans. This is not insignificant, since—setting aside the human animal—there are important philosophical reasons to reject the idea that plants develop into animals!

18 On Kant's argument that chemistry is not a proper science, see *KGS* IV: 468–471; *Metaphysical Foundations*, pp. 4–8. For an account of his subsequent reconsideration of the scientific potential of chemistry, see Michael Friedman, *Kant and the Exact Sciences* (Cambridge, MA: Harvard University Press, 1992) pp. 264–290.

19 For a compelling argument regarding the compatibility of Hegel's philosophy of nature with Darwinian evolution, see Stephen Houlgate, *An Introduction to Hegel: Freedom, Truth and History* (Oxford: Blackwell, 2005), pp. 173–175.

20 See Dieter Wandschneider, 'Hegel und die Evolution', pp. 225–240.

21 *W* 9: § 249, 31; *Philosophy of Nature*, p. 20.

22 Note, however, that Hegel himself reserves the language of 'progress' (*Fortschritt*) for rational development that is also expressed historically. Thus nature's system of stages is not, strictly speaking, 'progressive' in this technical sense (see Chapter 8 below). Yet Hegel does understand there to be an atemporal, rational *development* from abstractness to concreteness in nature, and it is therefore helpful to use the language of 'progress' here.

23 *W* 9: Addition to § 249, 32; *Philosophy of Nature*, p. 21. Translation modified. In addition to conceiving of nature's development as an ahistorical, logical explication of its fundamental stages, Hegel also sees the *historical* development of *individuals* to be philosophically significant. The idea Hegel opposes is that individuals of one natural kind metamorphose into individuals of another natural kind (*W* 9: § 249, 31; *Philosophy of Nature*, p. 20). Thus, Hegel says that metamorphosis is a concept that pertains exclusively to the individual (e.g., in the metamorphoses of a caterpillar as pupa and butterfly) and to the absolute Idea *as a whole*; in the former case, metamorphosis occurs in time, and in the latter case, it does not (Addition to § 249, 33; p. 22).
24 *W* 9: Addition to § 249, 32; *Philosophy of Nature*, p. 20.
25 Milič Čapek, 'Hegel and the Organic View of Nature' in *Hegel and the Sciences*, ed. Robert S. Cohen and Marx W. Wartofsky (Dordrecht: Springer, 1984), p. 112. In fact, Hegel is quite interested in Cuvier's paleontological research, and Hegel's rejection of the idea of epigenesis (what we now call evolution) is of a piece with his sympathies with Cuvier, who also rejected the theory and conceives of species as morphologically static. For the significance of Cuvier's comparative anatomy for Hegel's philosophy of nature, see Cinzia Ferrini, 'From Geological to Animal Nature in Hegel's Idea of Life', *Hegel-Studien* 44 (2009), pp. 66–82 and Henry Somers-Hall, *Hegel, Deleuze, and the Critique of Representation: Dialectics of Negation and Difference* (Albany: State University of New York Press, 2012), pp. 221–224.
26 See, for example, Sebastian Rand, 'The Importance and Relevance of Hegel's "Philosophy of Nature"', *Review of Metaphysics* 61 (2007), pp. 379–400. According to Rand, 'an adequate study of the *Philosophy of Nature* yields results for the problem of the rationality of scientific theory change, as well as yielding results in philosophy of mind and epistemology' (p. 382). The same epistemologically-oriented tendency can be found in Petry's interpretation of the philosophy of nature as a 'structuralization of the natural sciences.' M.J. Petry, Introduction to Hegel's *Philosophy of Nature: Volume I* (London: Routledge, 2004), pp. 21.
27 As Ferrini argues, the idea that Hegel is simply 'incorporating, reinterpreting, redescribing, and relocating scientific claims' also:

> risks neglecting Hegel's own impact on scientific quests, trends, and development, as though unlike Schelling, who is widely acknowledged to have been engaged in the scientific debate of the time, Hegel had confined himself to observing and judging the debate. This kind of reading also risks missing the point that working scientists were themselves aware of the theoretical implications of their approaches and tools, and often turned to philosophy, including Hegel's philosophy of nature.

Ferrini, 'From Geological to Animal Nature in Hegel's Idea of Life', p. 85.
28 Čapek, 'Hegel and the Organic View of Nature', p. 118.
29 Čapek, 'Hegel and the Organic View of Nature', p. 118.
30 Čapek, 'Hegel and the Organic View of Nature', p. 118. Emphasis modified.
31 *W* 6: 471; *Science of Logic* (Miller), p. 762.

32 *W* 6: 471; *Science of Logic* (Miller), p. 762, Emphasis modified. Hegel goes on: 'Nature, having reached this Idea [of life] from the starting point of externality, transcends itself; its end does not appear as its beginning, but as its limit, in which it sublates itself.'

33 *W* 9: Addition to § 268, 81; *Philosophy of Nature*, p. 61.

34 James Kreines, 'The Logic of Life: Hegel's Defense of Teleological Explanation of Living Beings' in *The Cambridge Companion to Hegel and Nineteenth-Century Philosophy*, p. 375. Kreines's emphasis on the importance of conceiving of nature as a *Stufenfolge* is very helpful in highlighting the problems with what he calls the 'organic monist' reading of Hegel. Note, however, that Kreines also claims that the higher stages of nature are more intelligible than the lower stages. I would prefer to put it like this: the higher stages of Hegel's system are more concrete and therefore ontologically richer expressions *of* intelligibility (i.e., reason as such) than the lower stages of nature. But we, as *thinking* beings, can grasp the intelligible structure of mechanical nature just as completely as we can grasp the intelligible structure of organic life and, moreover, our own spiritual freedom. It just so happens that there isn't as much explicit rationality to grasp *in* mechanical phenomena as there is in organic phenomena—indeed, there isn't as much *being* in the mechanical, despite its ontological priority. Compare this to Kreines: 'Mechanistic phenomena are perfectly real but only imperfectly intelligible. Living beings are more completely intelligible. And, ultimately, the only thing that is perfectly intelligible is us' ('The Logic of Life', p. 376).

35 The process that moves from nature to spirit is thus not an overflowing of being (procession from the One). For Hegel, an originally impoverished reality fills itself with content and thereby develops from a *lack* of being to a complete form of being. And all of this takes place on account of the immanent activity of negation. Martin Drees is therefore right, it seems to me, in suggesting that Hegel's philosophy of nature can be read as an 'inverted emanationism', although he means something entirely different by this term, namely, a philosophy of nature that is pursued from the perspective of the higher form of reality, i.e., spirit ('Evolution and Emanation in Hegel's Philosophy of Nature', *Bulletin of the Hegel Society of Great Britain,* 13 [1992], p. 58). On my view, Hegel's philosophy of nature is an 'inverted emanationism' because it proceeds from a systematically initial stage of ontological impoverishment (nature) to one of plentitude (spirit). (If we begin with the *Logic*, the same kind of accumulation of determinacy occurs.) But this reading is only possible if we refuse Drees's presumption that 'it is essentially spirit which sets forth the progress from materiality to immateriality' (p. 59).

36 The point holds for the human world as well. On an emergentist reading, inertia in the domain of nature and habit in the domain of spirit *really exist*, and it is only *through* their existence that higher levels of natural and spiritual determinacy arise, that is, are made necessary.

37 *W* 9: § 251, 36; *Philosophy of Nature*, p. 24. In support of the organicist interpretation, Hegel's conception of nature's wholeness seems to draw in some ways upon Kant's conception of the organism's activity of self-organisation. Moreover, beyond the philosophy of nature, he also tends to conceive of reason

in terms of life. For more on this and Hegel's inheritance of Kant's conception of purposiveness with respect to the structure of thought, see Karen Ng's *Hegel's Concept of Life: Self-Consciousness, Freedom, Logic* (New York: Oxford University Press, 2020).

38 I take Beiser to be a representative of this strong version of organicism. According to Beiser, one of the significant developments in Hegel's thought is from his early, theological conception of the organic unity of life to the scientific notion that the organic unity of life must be made intelligible and not merely 'experienced'. Beiser, 'Hegel and Naturphliosophie', p. 138. See also Beiser, *Hegel* (London: Routledge, 2005), pp. 88–89. This development, of course, has a great deal to do with Hegel's attempt to distance himself from the esotericism of romanticism and his commitment to justifying a quasi-romantic 'worldview' from the standpoint of rational phenomenology and logic. On my reading, Beiser rightly locates a shift in Hegel's thought away from the immediate, intuited organic unity of life. But that Hegel leaves behind his earlier conception of the absolute as life is not reducible to Hegel's newfound commitment to a logical method. More significantly for Hegel's ontology is that the mature Hegel realises that life is made possible only in an ontological process of abstract and, indeed, *mechanical* self-negation. With this, Hegel does not only leave behind the non-discursive, intuitionist conception of the absolute as life, but he substantially transforms the ontology that accompanied this earlier conception of life.

39 Kenneth Westphal, 'Philosophizing about Nature: Hegel's Philosophical Project' in *The Cambridge Companion to Hegel and Nineteenth-Century Philosophy*, p. 305n.

40 As Kreines writes:

> It is crucial that reality as a whole would not have a structure because it is really an organism, organic, or a *Naturzweck*. The point would be precisely the opposite: reality has a differentiated structure insofar as there are many different kinds or levels of phenomena which differ in real and important ways from biological phenomena and from one another.

Kreines, 'The Logic of Life', p. 376.

41 This point is similar to the one Hegel makes in the Preface to the *Phenomenology*, in which he himself uses the language of emergence. *W* 3: 53; *Phenomenology*, p. 33.

42 Beiser, 'Hegel and Naturphilosophie', p. 139.

43 Beiser, *Hegel*, pp. 85–86.

44 Beiser acknowledges that spirit should be distinguished from nature, but he then goes on to describe spirit as a higher degree of *life*:

> Of course, Hegel's concept of spirit stands on a higher level than nature, and it is not reducible to it; but it is still based upon nature, given that Hegel understands spirit as the highest degree of organization and development *of life*.

Beiser, 'Hegel and Naturphilosophie', p. 144. Emphasis modified. This is consistent with Beiser's claim that absolute idealism is compatible with

non-mechanistic naturalism, a claim that remains, on my view, too reductive of spirit's ontological specificity. Beiser, *Hegel*, p. 69. See Chapter 2 above for a related discussion about Beiser's reading of Schelling.

45 Beiser, *Hegel*, p. 112.

46 Posch, 'Hegel and the Sciences', p. 190.

47 Richard H. Jones, *Reductionism: Analysis and the Fullness of Reality* (Lewisburg: Bucknell University Press, 2000), pp. 14–16.

48 With respect to Hegel, deVries makes this latter point well:

> I find no indication that Hegel thinks he is reducing mechanics to psychology, nor any indication that he intends to eliminate mechanics … reductionism is not an open possibility, because then the stages he discovers in nature and spirit—the whole complex articulation of his system—would collapse into one basic level.

DeVries, *Hegel's Theory of Mental Activity*, p. 42.

49 *W* 9: Introductory Addition, 11; *Philosophy of Nature*, p. 3. See also the *Lectures on the History of Philosophy*:

> The opposition of physics and philosophy of nature is therefore not the opposition of the unthinking and the thinking view of nature … Philosophy of nature means, if we take it in its whole extent, nothing else than the thoughtful contemplation of nature; but this is the work of ordinary physics also, since its determinations of forces, laws, etc., are thoughts.

W 20: 425–426, 444; *Lectures on the History of Philosophy: Volume III*, p. 535. Translation modified.

50 *W* 9: Introductory Addition, 11; *Philosophy of Nature*, p. 3. Note that, according to Hegel, 'physics' isn't aware of its own rationality. The empirical scientist doesn't recognise that their own experience, central to natural-scientific research, is mediated by conceptual thought and therefore some form of metaphysics: 'All empiricists … believe themselves to be keeping to experience alone; it is to them an unknown fact that in receiving these perceptions they are indulging in metaphysics.' *W* 20: 84; *Lectures on the History of Philosophy: Volume III*, p. 182. See also *VPN* 2: 940. To drive home the point that empirical physicists are indeed rational—despite this lack of self-awareness—Hegel remarks that if physicists didn't utilise concepts but merely perceived the natural world, then they would be no different from animals. *W* 9: Addition to § 246, 16; *Philosophy of Nature*, p. 7.

51 'As the philosophy of nature is a *comprehending* (*begreifend*) treatment, it has as its object the same *universal*, but *explicitly*, and it considers this universal in its *own immanent necessity* in accordance with the self-determination of the Notion.' *W* 9: § 246, 15; *Philosophy of Nature*, p. 6.

52 *W* 9: § 246, 15; *Philosophy of Nature*, p. 6. Emphasis modified.

53 *W* 9: Remark to § 246, 15; *Philosophy of Nature*, p. 6.

54 Gerd Buchdahl, 'Hegel on the Interaction Between Science and Philosophy' in *Hegel and Newtonianism*, p. 71.

55 *W* 9: Remark to § 246, 15; *Philosophy of Nature*, p. 6. Translation modified.

56 This paragraph includes revised material from Berger, 'The Logic of Organic Forces: Hegel's Critique of Kielmeyer' in *Kielmeyer and the Organic World: Texts and Interpretations*, ed. Lydia Azadpour and Daniel Whistler (London: Bloomsbury, 2021), pp. 212–213.
57 *W* 9: Addition to § 246, 20; *Philosophy of Nature*, p. 10.
58 *W* 8: Remark to § 12, 58; *Encyclopaedia Logic*, p. 37.
59 On the role of Lavoisier's caloric theory in Hegel's logic of combustion, see Burbidge, *Real Process*, pp. 151–156.
60 On Hegel's reception of the concept of 'elective affinity' in particular, see H.A.M. Snelders, 'The Significance of Hegel's Treatment of Chemical Affinity' in *Hegel and Newtonianism*, pp. 631–643.
61 And significantly, for Hegel, there is no philosophical significance in how a philosophical system *comes to be*; there is significance only in the logic—and therefore the account of reality—that such a system reveals.
62 I am in this respect in full agreement with the important recent essay on Hegel's method by Anton Kabeshkin and Lorenzo Sala: 'A Priori Philosophy of Nature in Hegel and German Rationalism', *British Journal for the History of Philosophy* 30.5 (2022), pp. 797–817. As Kabeshkin and Sala argue, much of the confusion regarding Hegel's method can be cleared up by referring to the manner in which Hegel is returning to a pre-Kantian, rationalist form of inquiry, one that seeks to provide *a priori* demonstrations of particular laws of nature, which are *also* understood to be discoverable *a posteriori*. It is this possibility that Burbidge, it seems to me, misses in his critique of *a priori* readings of Hegel's philosophy of nature. Cf. John Burbidge, 'New Directions in Hegel's Philosophy of Nature' in *Hegel: New Directions*, ed. Katerina Deligiorgi (Chesham: Acumen, 2006), pp. 177–183. (Significantly for my purposes in this book, Hegel is not alone in this return to a pre-Kantian conception of *a priori* knowledge; as Kabeshkin and Sala note, Schelling's comments about method in the *Introduction to the Outline* should also be interpreted in this light. Kabeshkin and Sala, 'A Priori Philosophy of Nature in Hegel and German Rationalism', p. 807.)
63 Alison Stone, *Petrified Intelligence: Nature in Hegel's Philosophy* (Albany: State University of New York Press, 2005), p. xii.
64 Another way to say this is that I take Stone's mutually exclusive options of 'weak a priorism' and 'strong a priorism' to fit together quite well in Hegel's system, so long as we distinguish between the ontological progression of nature itself and the philosopher's historical discovery of that ontological progression.
65 According to Ferrini, 'the speculative task to be accomplished in respect to the results of empirical scientific knowing is to provide the conceptual *proof* of the necessity of the universalities … governing natural beings.' Cinzia Ferrini, 'Being and Truth in Hegel's Philosophy of Nature', *Hegel-Studien* 37 (2002), p. 81.
66 As Houlgate puts it, 'the logical connection between […] aspects of nature [do] not depend upon […] scientific discovery but [are] wholly *a priori*. The ability of the *philosopher* to recognize that *a priori* connection […] however, [depends] on the disclosure of science.' Houlgate, *An Introduction to Hegel*, pp. 116–117. For a very different account of Hegel's philosophy of nature, one that sees the philosophy of nature as dependent upon experience for its

philosophical justification, see Wes Furlotte, *The Problem of Nature in Hegel's Final System*, pp. 25–26.

67 *VPN* 2: 763.

68 *VPN* 2: 763.

69 *W* 9: Remark to § 246, 15; *Philosophy of Nature*, p. 6.

70 *W* 8: Remark to § 12, 57–58; *Encyclopaedia Logic*, p. 37.

71 Petry, Introduction to Hegel's *Philosophy of Nature*, p. 21.

72 *W* 9: Addition to § 268, 82; *Philosophy of Nature*, p. 62.

73 *W* 9: Addition to § 268, 82; *Philosophy of Nature*, p. 62. Emphasis modified.

74 Stone, *Petrified Intelligence*, p. 6.

75 Stone, *Petrified Intelligence*, p. 11.

76 Houlgate, like Stone, emphasises the distinction between logical determinations and empirical-scientific representations, which opens up the possibility that the philosopher of nature can be confused about which empirical-scientific representations correspond to philosophical concepts. Cf. Houlgate, *An Introduction to Hegel*, pp. 117–118. This view is supported by comments of Hegel's such as the following:

> Our procedure consists in first fixing the thought demanded by the necessity of the Notion and then in asking how this thought appears in our ordinary ideas. The further requirement is that in intuition, space shall correspond to the thought of pure self-externality. Even if we were mistaken in this, it would not affect the truth of our thought.
>
> (*W* 9: Addition to § 254, 42; *Philosophy of Nature*, p. 29)

Also:

> [Self-externality] is the thought established through our first idea of nature. When we look around in nature, we seek to designate a representation that corresponds to this thought. The claim is made: it is space. But if it isn't space, *this doesn't affect the thought, which for that reason still remains true*.
>
> (*VPN* 1: 531—emphasis modified)

On my view, these passages are better understood as describing the relationship between philosophical concepts and our *non-theoretical* 'intuitions' or, more precisely, our non-scientific representations of empirical phenomena, rather than the relationship between philosophical concepts and empirical-scientific representations as such. Moreover, nothing of this kind appears in either the *Encyclopaedia* paragraphs themselves or in the remarks. For these reasons, I take these offhand comments to be precisely that, comments Hegel made during his lectures that were simply meant to emphasise the fact that the philosophy of nature presents a strictly rational derivation of logical-natural determinations. It is very difficult to imagine that Hegel ever seriously considered the possibility that he might be wrong about self-externality being the immanent logical structure of space.

77 For a similar critique of Stone that also focuses on the division between logical concepts and natural-scientific representations, see Edward Halper, 'A Tale of Two Metaphysics: Alison Stone's Environmental Hegel', *Bulletin of the Hegel*

*Society of Great Britain* 26 (2005), pp. 5–6. See also Stone's 'Response to Halper and Dahlstrom' in the same issue, pp. 22–27.

78 Although Stone does not defend Hegel's philosophy of nature *tout court*—indeed, she takes issue with fundamental aspects of Hegel's project—she does defend it against criticisms regarding its supposed dependence on antiquated science.

79 Benedetto Croce, *What is Living and What is Dead of the Philosophy of Hegel*, trans. Douglas Ainslie (New York: Russell & Russell, 1915). Croce did see something of merit in Hegel's philosophy of nature, namely, the critique of the natural scientist's metaphysical presuppositions (pp. 165–166). Nevertheless, he interprets Hegel's discussion of the relationship between the philosophy of nature and empirical science as disingenuous, for Croce takes the sciences to be either *fully* capable or utterly *incapable* of grasping nature's structure (pp. 169–173).

80 See Francis Bacon, *The New Organon*, ed. Lisa Jardine and Michael Silverthorne (Cambridge: Cambridge University Press, 2000), pp. 68–69.

81 I therefore disagree with Burbidge's argument that:

> if Hegel's philosophy of nature is a logical construction that purports to tell us what nature is all about, it remains simply a curiosity … It would then be hard to mine it for new directions of Hegelian research. Rather, it would continue to be—what it was for over a century and a half—an embarrassment for all serious students of Hegel's thought.

Burbidge, 'New Directions in Hegel's Philosophy of Nature', p. 179.

82 For an account of Hegel's methodology that sees it as committed, in one sense, to strictly ideal or rational development while also making room for potential revision in light of empirical discovery, see Wandschneider, 'Hegels Naturontologischer Entwurf – Heute', p. 150.

# 6 The Self-Formation of Matter

Hegel's *Encyclopaedia* Philosophy of Nature is divided into three sections: mechanics, physics, and organics. In this chapter, I consider the logical development of mechanical nature and the transition from mechanics to physics. Because the mechanics is the first section of Hegel's nature philosophy, my focus on the mechanics is meant to clarify both Hegel's general conception of nature as 'self-external being' and the particular logic at work in the mechanics, which immanently drives self-external being beyond its mechanistic and merely self-external character.

To begin, it may be helpful to briefly present a broad overview of this development. In the first stages of the philosophy of nature, we discover that nature is, for Hegel, nothing less than matter-in-motion. Motion, we learn, is intrinsic to the being of matter; it does not come to matter from without. As the motion in nature becomes more fully apparent, we gradually come to see the emergence of qualitative determinacy and nascent forms of autonomous self-development—the two of which are connected for Hegel. Thus we learn that nature does not only involve quantitative determinacy such as mass, weight, and velocity, but also bodies and processes that have qualitatively distinct forms of their own that distinguish them from other bodies and processes. With the logical emergence of qualitative determinacy in nature, the pure externality of nature proves to involve a kind of 'inwardness'. With such 'inwardness', nature begins to express the first signs of freedom, prior to the emergence of life and spirit. This chapter therefore considers the logical development of Hegel's speculative mechanics in order to argue that, for Hegel, the gradual—yet ahistorical—emergence of self-determining natural beings is a process by which 'self-externality' turns inward.[1]

Before proceeding to elucidate the fundamental features of Hegel's mechanics, a note about my hermeneutic strategy regarding Hegel's mature system as presented in his *Encyclopaedia*: Since the paragraphs of the *Encyclopaedia* are meant to comprise the essential framework of the

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system, I grant priority to the paragraphs themselves. Yet I do not dismiss the remarks or even the additions as 'unreliable'. To be sure, the additions in particular present serious interpretive difficulties, since Hegel himself was not responsible for their being appended to the paragraphs, and many of them originate from lectures Hegel delivered long before he devised the final version of his *Encyclopaedia*. In fact, a number of the additions were taken by Michelet from Hegel's Jena philosophy of nature and should therefore not be taken without qualification as representative of Hegel's mature view. That being said, Hegel's mature view did not emerge spontaneously with the publication of the first part of the *Science of Logic* in 1812, nor did Hegel's 1830 presentation of his mature system signal a radical departure from the earlier versions of the *Encyclopaedia*. Thus, while it is important to treat the additions to the 1830 *Encyclopaedia* as textually distinct from the paragraphs and remarks, they can also be enormously helpful in elucidating Hegel's thought.[2]

## Space

The first logical stage of nature, according to Hegel, is space. But Hegel does not begin arbitrarily with this determination of nature. In order to understand why space constitutes the first stage of nature's dialectic, we need to begin with the description of nature that emerges at the end of Hegel's logic.

In Chapter 4, we saw how Hegel's conception of nature as the externalisation of *logos* leads him to conceive of nature as the 'absolutely powerless' in the sense that nature is the logical domain of unreason. But the 'externality' of nature does not exclusively signify its impotence with respect to reason. To be sure, nature is the domain in which irrationality reigns, but the self-externalisation of reason additionally implies something positive about the *being* of nature: nature is the Idea in its being-*outside*-itself or self-*externality* (*Außersichsein*), and this self-externality will define every stage of nature's development. Indeed, the development of nature will be driven *by* the logic of self-externality. As we will see, it is only with the emergence of spiritual existence that the externality of nature is fully overcome, and even this spiritual overcoming of externality is an arduous task propelled, again, by the logic of nature's self-externality. Throughout the following two chapters, therefore, my aim is to show how, according to Hegel, the internal life of spirit does not emerge spontaneously from an otherwise self-external natural world. On the contrary, nature is a 'system of stages' precisely insofar as nature's intrinsic self-externality necessitates a dialectical movement that gradually involves increasingly 'internal' forms of natural existence, i.e., forms of existence that are more qualitatively distinct and autonomous.

To begin with, however, the following is as far as Hegel goes in describing nature's ontological status: nature is the Idea, or reason, in its self-externality. To take up this notion of self-externality in its immediacy is to take up the concept of self-external being *in general*. At this stage, nothing concrete about nature presents itself to thought, nothing, that is, except for the mere fact that we are dealing with the Idea in its *general* concreteness, i.e., the Idea that *is*, nature as such. In other words, at the beginning of the philosophy of nature, we are concerned with nature in its immediate, abstract generality as concrete, self-external being.

According to Hegel, a difficulty presents itself as soon as we begin to unpack the notion of such immediately self-external being. On the one hand, we are considering being that is entirely outside itself and is therefore *different* from itself. On the other hand, we have before us simply immediate self-externality, and as such, self-externality is not really external to itself or different from itself. Rather, such self-externality just is self-externality all the way down, fully self-*continuous* self-externality without determinate difference.[3] Nature is, then, entirely outside itself, and yet in being outside itself, nature is just more of the same. This combination of self-externality and continuity allows Hegel to see, in the immediate being of the self-external Idea, the ontological form of space. Indeed, space, according to Hegel, just is self-externality that is wholly selfsame and continuous *in* its self-externality.

To make sense of this idea, we need only think of a point. Such a point is *discrete*, insofar as it is the point that it is, and yet it is entirely interchangeable in that, as an *abstract* point, nothing distinguishes *this* point from *that* point. More appropriately, however, since we have not yet arrived at the geometrical conception of 'point', we should say: this space is no different from that space. And ordinary language confirms that it would indeed be strange to claim differences between this and that *space*. We commonly differentiate one *place* from another, but, as Hegel shows at a further stage in the philosophy of nature, place involves far more determinacy than mere space. Space is strictly quantitative externality, and thus any part of space is entirely interchangeable with any other part. Space is, in other words, being-outside-itself that remains that same being-outside-itself throughout its infinite, continuous extension. Indeed, there is no end to the space through which nature manifests itself as other than itself. Thus, in the paragraph that begins the immanent dialectic of nature (§ 254), Hegel claims that *discreteness* and *continuity* are the essential determinations of space.[4] For on the one hand, self-external being is external to itself, and this grants space *discreteness* precisely in being *other* than itself; and on the other hand, self-external being is *continuously* external to itself without any determination.[5] In the words of Samuel Alexander, space for Hegel is 'juxtaposition pure and simple without a break'.[6]

In the following two paragraphs of the *Encyclopaedia* (§§ 255–256), Hegel further unpacks the logic of space. Because space is the Idea in its self-externality, space must necessarily involve genuine difference.[7] Why *must* space involve genuine or 'real' difference and not simple self-externality ad infinitum? One way to see this necessity, according to Hegel, is to consider the fact that we are dealing here with the absolute Idea in its primary manifestation, and as we have already learned in the *Logic*, the absolute Idea is a *concrete* universal. As such, the Idea necessarily expresses itself in a differentiated manner, specifically in the form of particular, determinate being.[8] But I believe we can set this reference to the *Logic* aside and simply focus on the contradiction Hegel tells us is at work in spatial being: space is immediate self-externality, which means it must be both *different* from itself and *selfsame* insofar as nature is *endlessly* different from itself. If we focus on the first feature of nature, then space—the Idea in its estrangement from self—must necessarily involve concrete *differences*. For space is the Idea in its self-*externality*, and thus it is necessarily an expression of the Idea's *differentiation from self*. Such self-differentiation is only *implicit* self-differentiation so long as space is nothing but continuous self-externality. Once we understand that space involves three dimensions, however, we see the first *explicit* differentiation of space. With three-dimensional extension, space can no longer be conceived of as simply continuous self-externality, for space necessarily involves the real differences between length, breadth, and depth.

The details of Hegel's deduction of the three dimensions are difficult to follow, but I follow Houlgate in reading this deduction to be a strictly logical deduction.[9] First, Hegel notes that, insofar as space *does* include difference, then such difference is 'the *negation* of space itself'.[10] In other words, since space is *continuous* self-externality, to whatever extent such self-external being is in fact differentiated from itself, space is no longer continuous with itself, but is the immediate negation of that continuity. We are dealing, then, with something *non-spatial*, precisely insofar as the continuity of self-externality is punctured. What is a non-spatial, differential element of space? A point.[11] Since the point has no parts and cannot be divided, it is necessarily without extension. A point, in other words, is a *dimensionless* location in space. And from this dimensionless point (i.e., the negation of space), Hegel derives the three dimensions.

The first dimension of space, according to Hegel, is nothing other than the implicit truth of the point made explicit. For the point is the negation of space—it does not, in fact, have any spatial being or extension—and yet this negation of space is a *spatial* negation of space. How can the point be, at one and the same time, spatial and non-spatial? The point is non-spatial precisely because it cannot be located in space as *actually* extended; the infinitely small point is purely ideal. And yet this negation of space has

been determined from within the logic *of space*. It remains bound, in this way, to spatiality, and is therefore rightly understood to be a fundamental principle of geometry. Indeed, points are not simply 'non-spatial'; they are implicitly spatial negations of space, since they are meant to point out distinct locations within space. The point therefore negates its limited character as *mere* negation and raises itself to the determination of its explicit truth: a negation of space that is *explicitly* spatial. In geometry, the line is such an explicitly spatial negation of space, for it cuts into the continuity of space through its own spatially extended being. As a truly spatial negation of space, the line thus effects a more determinate negation of space. In Houlgate's words, 'The line interrupts space not just by constituting a pure point of rupture but by actually stretching out and dividing space in two.'[12] With such an explicitly spatial negation of space, nature proves to be extended in at least one dimension.

But very quickly, we learn that space cannot remain merely one-dimensional extension. In other words, space cannot remain the mere 'spatial negation of space', because the being of space is self-*externality* or *otherness*-from-self. And if space were one-dimensional length and nothing further, then space would remain *what it is* as the spatial negation of self. In other words, space wouldn't be truly external to itself, because it would be its own negation pure and simple, without being differentiated from this negative relation-to-self. Truly self-external being, according to Hegel, must negate even the self-negation of space. That is, self-externality must sublate simple length as its sole dimension and involve a second dimension, a dimension that—combined with the first—is logically distinct from mere length, which simply *divides* space.[13] Once space proves to involve a second dimension, then, we see that space isn't simply negated, but that the linear division of space is *itself* negated and that this generates a positive form of spatial extension: the geometrical plane. In other words, two-dimensionality affirms the self-externality of space as *positive being* through the process in which space negates its negative character.

That space achieves an affirmative ontological status in two-dimensionality or planar being does not mean that space is now affirmative in the sense of being simply continuous with itself; space has not returned itself to its prior determination as immediate self-externality. Rather, space has raised this positive aspect of self-externality to a more concrete determination: no longer simply continuous self-externality, space now achieves *determinacy*—albeit, still *quantitative* determinacy—through the 'spatial zone' that is constructed in the plane. Whereas the line simply cuts into space as its spatial negation, the plane constitutes a distinctive region of two-dimensional extension.

We know that, from the perspective of Euclidean geometry, space is not two-dimensional but three-dimensional. In order to justify the necessity of

three-dimensionality from the perspective of pure reason, however, Hegel thinks we must further unpack the logic of planar being. Planar extension is, according to its explicit logic, the negation of the negation of space, i.e., the sublation of length as two-dimensionality. But as we have seen, implicit in the negation of negation is the affirmative character of extension. There is thus a dual logic at work in planar extension: On the one hand, two-dimensional space requires that nature express itself in *determinate* surfaces (this determinacy being the explicit negation of linear negation); but on the other hand, this determinacy achieved via the negation of negation involves a return to the *selfsame* characteristic of space as continuity-with-self. This latter, affirmative feature of planar being is not separate from its determinate negation, yet it is not entirely explicit in mere two-dimensional extension. According to Hegel, if we emphasise the affirmative character of the plane, rather than focus on the negation of negation, then we move from the *plane* (Fläche) to an '*enclosing surface* [schließende Oberfläche] which separates off a *single* whole space.'[14] Such a single, *whole* space is not merely affirmative via its negation of length, but is, rather, affirmative *as such*, *full* of *being* in a manner that is only hinted at in two-dimension extension. In other words, the planar negation of linear negation is, implicitly, a wholly affirmative, plentiful spatiality of an enclosing surface. And while Hegel does not believe we encounter purely geometrical objects in space, he does believe that nature is *necessarily* three-dimensional *being* in this manner, namely, as the fullness or presence of three-dimensionality. Indeed, the natural world—i.e., self-external being—*must* be comprised of three dimensions. We thus come to learn that points, lines, and planes are mere abstractions from the concreteness of three-dimensionality.

We can understand Hegel's deduction of the three dimensions from another perspective if we focus on the essential determination of nature as self-externality; unpack the notion that every feature of space is necessarily external to itself; and then imagine what this would mean once we grant Hegel that the non-being or negation of space is the point. I take Winfield to follow such a procedure when he explains that, insofar as the point is in fact a spatial negation of space, the point itself must be defined by self-externality and cannot, therefore, remain the point that it *is*, but necessitates point-being *outside* it.[15] Thus, according to Winfield, we can imagine a point necessitating a point beyond it, which, in turn, necessitates a point beyond it, and so on to infinity. Such a series of points, infinitely extended in space, constitutes a line. And a line can only properly be the spatial feature it is if it, too, is characterised by an essential self-externality and in this way lies outside itself. Thus, we can envision a line necessitating a line next to it, which, in turn, necessitates a line next to it, and so on. Such an infinite series yields planar being. And, as Winfield writes, 'for

its part, the plane is immediately self-external, yielding planes stacking continuously upon another other, producing a three-dimensional space, whose boundary can only be another volume in continuity with others without end.'[16] In this way, the fundamental determination of nature—the self-externality of logos—necessitates three-dimensional, spatial extension as the primary determination of nature and, moreover, reality. Winfield makes an important point, then, when he goes on to say that 'all of these determinations arise simply from the self-externality of the totality of determinacy and enable space to have its rudimentary character without presupposing time, motion, or matter.'[17]

All of this is helpful. But it is worth noting that Winfield's account of the derivation of the three dimensions appears to be more 'representational' than strictly logical. And this could, potentially, be misleading if we were to think that the *only* logical feature of two-dimensionality is 'infinitely parallel lines', the *only* logical feature of three-dimensionality is 'stacked two-dimensionality', and so on. Thus, while Winfield helps us picture just how self-externality is configured as three-dimensional being, something is lacking in this account of the logical *differences* between line, plane, and enclosing surface. Houlgate, it seems to me, brings out these differences in emphasising Hegel's claim that 'The difference of space is … essentially a determinate, *qualitative* difference.'[18] According to Houlgate,

> the plane … is qualitatively different from the line, since it is not merely a boundary in space but a bounded affirmative space. Due to this qualitative difference between the two, the plane cannot be conceived of simply as the product of more than one line, but must be understood as the definite *negation* of the line as such.[19]

The language of quality here is perhaps surprising, given that we are within the realm of strictly quantitative determinacy in the mechanics;[20] but the point is that the transition from one-dimensionality to two-dimensionality is made possible through negation, and negation brings about some real difference. For Hegel, with each stage of the logical derivation of three-dimensionality, something new is discovered to be essential to what space is, something implicit in the idea of 'self-externality' but only comprehended if line, plane, and enclosing surface are logically differentiated from one another.

And yet, despite the fact that the logic of space involves determinate differences between linear, planar, and voluminous being—namely, negation, negation of negation, and affirmation—Winfield's account of this logic is helpful in driving home the point that *even with these differences made explicit*, space remains, essentially, merely *quantitative* extension. Indeed, Hegel's own description of space as involving 'qualitative

difference' runs the risk of implying that already at the stage of spatiality, nature involves qualitative determinacy. But this misrepresents how Hegel conceives of the logical development of nature. For qualitative determinacy does not emerge until the end of the section on mechanics with the 'absolute' motion of the planets, and even then such qualitative determinacy is not made fully explicit until the transition to physics with the phenomenon of light. At this rudimentary stage of nature, we are only just beginning to unpack the logic of *mechanical* nature, and such a mechanics is ontologically distinct precisely insofar as qualitative determinacy is utterly lacking in mechanics. Indeed, the entirety of the mechanics is devoted to unfolding the *quantitative* determinacy of nature; and although line, plane, and encompassing surface involve 'qualitative difference', three-dimensional space as such is not qualitatively determinate. That Hegel calls the dimensions of space 'qualitatively different', therefore, must be understood to mean something other than the idea that sheer spatial extension explicitly involves qualitative determinacy.

Hegel claims that even though the three dimensions are logically distinct (or 'qualitatively different'), they are also 'merely *diverse* [*bloß* verschiedenen] and possess no determination whatever'.[21] In other words, the 'being-outside-itself' of space must be determined as genuine being-outside-itself (i.e., *three*-dimensional extension), but this ontological difference intrinsic to space will really be a mere diversity, a difference lacking in qualitative determinacy.[22] As I understand it, Hegel's point here is not that the *signifiers* 'length', 'breadth', and 'depth' are arbitrary and are therefore interchangeable *terms*.[23] Although he claims that 'it is not at all fixed whether a direction is called height, length, or breadth,'[24] Hegel's point is rather strictly ontological: any one of the three-dimensions is *ontologically* identical to any other dimension; the three dimensions themselves are not *different* from one another. On the contrary, the *difference* intrinsic to space is really nothing beyond the ontological extensity involved in *three*-dimensional being. Length, breadth, and depth, taken in themselves, are nothing but one-dimensional, and as such, are entirely interchangeable; there is no ontological difference between *this* and *that* dimension.[25] The ontological difference constitutive of spatial extension, then, comes by way of the self-sublating character of one-dimensionality as two- and finally three-dimensionality. For three-dimensional being necessarily involves *three* dimensions which can in no way be reduced to *one*. In this way, space is not *simply* 'diverse' or composed of three, indeterminate dimensions, but involves a self-externality that *affirms* its being as different from itself through three-dimensional extension.

It is important, for Hegel, that all of this can be derived from the sheer self-externality that nature is. Space is at once continuous with itself and

yet its self-externality must break through. The first way difference breaks through its immediacy and abstractness is in three-dimensionality that is no longer simple side-by-sideness, but expresses the *affirmative* moment of difference. The second way difference begins to break through its abstract immediacy is through temporality, by which nature expresses the *negative* moment of self-external being.

### Time

Hegel's logical derivation of time is even more challenging than his derivation of the three dimensions. In order to understand Hegel's logic of time, let us take a step back and consider the 'motor' that has been driving the dialectic of nature thus far.

As we saw, the self-externality or self-otherness of the Idea is nature itself. But this self-externality is only *abstractly* other than or outside itself when considered in its immediacy. For immediate self-externality is just externality that is outside itself ad infinitum, hence the infinite continuity of space. Yet insofar as this self-external being is *truly* differentiated from itself, such self-externality necessarily manifests itself in three dimensions. The deduction of nature's three-dimensionality results from taking seriously the *negativity* of nature inherent in the Idea, i.e., the *otherness* and *difference* that self-externality is. But as we saw above, the dialectic of space finally *affirms* this otherness in such a way that negativity seems to drop out of the picture. To be sure, the negative moment in nature is at work in the logic of space, but it is at work precisely as a *moment* of the fundamentally affirmative character of spatial extension.

When we turn our attention to time, we find that this affirmative character is entirely lacking. Time is the abstract form of nature in which negativity reigns *as negativity*.[26] In time, the self-externality of nature is not affirmed as *being*; instead, the negative and external character of self-externality comes into its own as truly negative, i.e., as *non*-being. But in order to see this, we cannot simply posit time as *opposed* to space, as a *second* form of nature unrelated to the first. On the contrary, the dialectic of time, for Hegel, is already implicit in the dialectic of space. In Hegel's words:

> The truth of space is time, and thus space becomes time; the transition to time is not made subjectively by us, but made by space itself. In pictorial thought, space and time are taken to be quite separate: we have space and also time; philosophy fights against this 'also'.[27]

Philosophy 'fights against' the 'also' of 'space and also time' by showing how the latter is necessitated by the former. In this way, there could be

neither a spaceless time nor a timeless space; space and time require one another. Space and time should not, therefore, be conceived of as two separate forms of nature, but rather as intrinsically connected. And yet, the two are logically distinguishable.

In order to understand Hegel's conception of time, we need to begin where we left off in our discussion of space. At the end of § 256, Hegel is considering the affirmative being of space, which contains its negation in the point and in the line, but which is not fundamentally disturbed by this negation. Space is, even once differentiated through its three dimensions, a being characterised by *self*-externality, i.e., a being in which difference or otherness is subordinated to the generally affirmative being and continuity of extension. With this emphasis on space as continuous *being*, we can understand that space is constituted by a fundamental presence (*praesentia*); space is '*here*' not as a specific location but more generally as that which *is*. Indeed, the first dimension of space (the explicitly spatial negation of space) does not *actually* tear space into two, because length is sublated in two-dimensional and three-dimensional space. The truth of space, as we saw, is affirmative extension, and the negative moment of space is merely a moment of this affirmative spatial presence.

But if nature is in fact self-*external* being, it must *actually* negate itself, and not merely in order to reestablish its continuity-within-difference as three-dimensional extension. Insofar as nature *truly* negates itself, nature is *temporal*. For, according to Hegel, 'time is precisely the existence of [the] perpetual self-sublation [of space].'[28] In what sense can time be said to sublate or negate space? Why would Hegel identify time as the negative of space? First, we should note that time differs from the negations of space we have already considered. Whereas the point is implicitly spatial and the line is an explicitly spatial negation of space, time is, to start with, entirely non-spatial. Although it is necessitated by space itself, time is something other than space, as opposed to being an ideal feature *of* space. In this way, time accomplishes the negation of space which the spatial negations of space—the point and the line—fail to accomplish: time is not reincorporated into space as one of its dimensions, but remains utterly non-spatial so long as it is time. But that time simply 'isn't space' or a feature of space is not enough for us to identify time as the *negation* of space. According to Hegel, time is the negation of space because time is the means by which spatial being *becomes absent*. For time is the coming-to-be and ceasing-to-be of self-external being. 'Everything … comes to be and passes away in *time*.'[29]

Hegel identifies time with the abstract, logical category of 'becoming'.[30] 'Becoming', according to Hegel's *Logic*, has two senses. It is at one and the same time the transition from being to non-being and the transition

from non-being to being.[31] When thought concretely in the *Philosophy of Nature*, these two senses of becoming correspond to (i) the passage from the affirmative being of spatial extension to its negation (ceasing-to-be) and (ii) the emergence of spatial presence from its non-being (coming-to-be).[32] What is presently extended in space will eventually recede into nothingness, the same non-being from which that spatial presence once emerged. The passage of time is therefore the necessary logical-natural determination in which spatial presence is negated. Without this reference to time, there can simply be no account of the concrete negativity at work in the process of becoming. For pure space does not allow for such coming-to-be and passing-away; space just *is*, and is infinitely continuous at that. The intrinsic negativity of space only ends up reaffirming such ontological presence in the form of three-dimensional extension. Insofar as nature is temporal, however, the presence of extended being is shot through with the negativity of its past and future, the nothingness from which everything emerges and to which everything returns. Thus, once the truly self-contradictory character of self-externality makes itself explicit, the affirmative being of space is negated in the form of temporal becoming—the passing from non-being to being and back again.

Because of the abstract nature of Hegel's discussion of time, we might be tempted to understand such temporal becoming as a 'container' to which all beings owe their generation and destruction. But Hegel warns against conceiving of time in this manner, as if 'things' were in some other 'thing' called 'time': 'it is not *in* time that everything comes to be and passes away, rather time itself is the *becoming*, this coming-to-be and passing away.'[33] Time, in other words, is just the becoming *of beings*; it is not some container *in* which beings come-to-be and cease-to-be:

> Time is not, as it were, a receptacle in which everything is placed as in a flowing stream, which sweeps it away and engulfs it. Time is only this abstraction of destruction. It is because things are finite that they are in time; it is not because they are in time that they perish; on the contrary, things themselves are the temporal, and to be so is their objective determination. It is therefore the process of actual things themselves which makes time.[34]

Temporal existence is intrinsic to each and every being and is nothing other than *their* generation, endurance, and destruction.

The same point about the immanence of time also holds for space. Space is not an empty container within which beings appear. Beings just *are* extended—and three-dimensionally at that—because this is how the Idea determines itself. As Findlay writes, 'pure Space is nothing real and substantial … things in Nature are in Space, merely because Space is the

form of their universal externality and otherness.'[35] The difficulty, however, is that we are not considering the logic of *particular* beings at this stage in the philosophy of nature. On the contrary, at these initial stages of nature's development, Hegel is at pains to elucidate the most abstract determinations of the natural world. Thus, although spatial extension and temporal duration are nothing outside the becoming and abiding *of beings*, we must here remain with the general logic of space and time, without constantly referring to the concrete reality of those beings that comes to be, persist, and cease to be.

We can better understand the abstractness of this stage of the philosophy of nature with reference to Kant. According to Hegel, Kant wasn't entirely wrong to identify space and time as forms of intuition.[36] For Kant and Hegel alike, space and time are the fundamental forms through which objects appear in the world. Where Kant went wrong, according to Hegel, was in identifying space and time as our 'subjective' forms of intuition. For this led Kant to erroneously posit (i) that there are non-apparent things-in-themselves which are, by definition, *not* spatiotemporal;[37] and (ii) that non-human rational beings could plausibly have *different* forms of intuition, leading Kant to a distinctively anthropocentric brand of subjectivism.[38] Thus, while Hegel embraces Kant's idea that space and time are *forms* of sensible appearance and are therefore neither real independently of objects (as Newton thinks) nor reducible to object relations (as Leibniz thinks), he rejects the Kantian notion that objects conform to forms of intuition *that are not their own*. Hegel therefore agrees with Kant that space and time are the forms through which the world is sensible, with the important caveat that these forms are not particular to our idiosyncratic way of intuiting but are intrinsic to objects themselves. In order to make this point, Hegel argues that reason, or the absolute Idea, logically determines *itself* as spatial and temporal—a self-determination that, we should note, logically precedes any account of those beings capable of intuiting.[39]

If we set aside Hegel's insistence upon the logical nature of this self-determination of reason as spatiotemporal, we can see that Hegel's general view is not so far from Schelling's. Hegel doesn't refer to Schelling in these sections of the philosophy of nature, but it is undeniable that Schelling is a major inspiration for his critical reinterpretation of the transcendental aesthetic.[40] During their collaborative years in the early 1800s, Schelling and Hegel rejected the Kantian identification of space and time as merely subjective forms of intuition, and both philosophers sought philosophical paths that could reveal the manner in which space and time are immanent to reason itself. For, on their shared view, reason is the absolute, which—according to its own internal necessity—expresses itself as spatiotemporal being. There is nothing contingent, on this view, about the fact that reality

is spatial and temporal, and there is consequently nothing idiosyncratic about how we human beings intuit objects.

Thus, for Hegel, the forms of space and time are entirely objective, the forms immanent to objective reality itself, without any reference to a transcendental subject. The abstractness of space and time does not make them unreal, then; it means that space and time have no reality *beyond* the stuff—whatever this stuff turns out to be—that is extended in space and comes to be, endures, and ceases to be. This is one sense in which space and time are 'abstract' and yet fully real. There is, however, another sense in which space and time are abstract. In order to elucidate this second sense of abstractness, I will quickly review what has unfolded so far in the dialectic of nature.

The self-externalisation of reason necessitated that being is outside itself, i.e., that concrete reality, or nature, is defined by nothing other than its self-externality. Space is precisely this self-externality, and yet space fails to be the self-external being that it is; although space is externality in the form of extension, it is too continuous with itself and, even once dimensionally differentiated, affirms itself as fully *present*, three-dimensional extension.[41] As such fully present being, space never rids itself of its continuous nature, despite the fact that it is a being-outside-itself and therefore ought to be, by its own internal logic, fully differentiated from itself. To be *truly* outside itself, to be an *actual*, as opposed to merely '*ideal* side-by-sidedness',[42] spatial being cannot remain continuous with itself; space must be evacuated of its affirmative presence in order to achieve genuine asunderness. This, as we have seen, is accomplished through what Alan Brinkley calls 'the diremptive surge of time'.[43]

But time, Hegel tells us, is just as *abstractly* self-external as space. As an abstract determination of self-externality, time is similar to space in being continuous with itself, 'for it is the negativity abstractly relating self to self, and in this abstraction there is as yet no real difference'.[44] But how can time, which is the explicit *negativity* of nature, not involve *real difference*, especially considering the fact that it is *through* time that space becomes actually differentiated? I believe Hegel's point here is the following: time, considered in itself, is self-continuous in much the same way that space is; there are no gaps in time just as there are no gaps in space. Likewise, time goes on ad infinitum, as does space, and this is the second sense in which these forms of nature are abstract. Nature is infinite expansiveness in the form of spatial extension and endless becoming in the form of temporal duration. Every subsequent stage in Hegel's system of nature will involve more concrete determinations of being than these abstract and infinitely continuous determinations of space and time.

Insofar as time expresses the coming-to-be and passing-away of spatially extended being, one can see that time itself is divided between what

*had* being, what *has* being, and what *will have* being. Indeed, on account of time's negating activity, Hegel tells us that the past, the present, and the future are necessary moments of temporal duration.[45] Importantly, however, insofar as we remain focused on the self-externality of *nature*, each dimension of time is fundamentally a *present* moment. To be sure, when the present moment passes away, it is 'past' and therefore absent. But this pastness is nothing other than a past presence, a present moment that *is* no longer. The same can be said of the future: what is to come is to come in the form of presence such that the future is nothing more than a presently absent presence. This is of the utmost importance to Hegel's logic of time: although time is the *negation* of spatial presence, the *present moment* (i.e., the 'now') remains the immanent truth of the past and the future.[46] Pastness, presence, and futurity are each correctly understood in terms of presence: a past, present, or future 'now'.

From Hegel's perspective, this determination of the dimensions of time as various expressions of presence is highly significant. Because the truth of time has proved to be *presence*, the affirmative being of nature has again announced itself, and *what is* yet again predominates over *what is not*. According to Hegel, this means that temporal becoming does not remain sheer flux, but logically becomes space.[47] And once we grasp that time determines itself as space, we arrive at the third and fourth stages of nature: place and matter-in-motion.

## Matter in Motion

That the dimensions of time are finally reducible to different forms of presence indicates, according to Hegel, that time determines itself as space. In Hegel's words, 'time is the immediate *collapse* into indifference, into undifferentiated asunderness or *space*, because its opposed moments which are held together in unity, immediately sublate themselves.'[48] Since past, present, and future, as distinct logical moments, 'immediately sublate themselves', they become one, undifferentiated in the 'now'. Thus, despite the fact that time negates space through the *non-being* of the past and future, time subsequently determines itself as the present *being* of space. Yet as is always the case with Hegel, the re-emergence of a logical form is never a simple return to that form. The 'collapse' of time into space in fact raises time to a more complex ontological determination. For once we understand the negativity of time to affirm itself in the present 'now', we do not simply have before us the logic of space as it unfolded prior to the emergence of time. On the contrary, we are now confronted with the affirmative and ontological continuity of spatial extension in a far more *concrete* sense than before, because we are no longer considering mere space, but the unity of space and time. That is to say, we are now

considering the temporalisation of space and the spatialisation of time as *one* phenomenon in which spatial being and temporal becoming are united.

In order to understand what Hegel means regarding the unity of space and time, let us recall the first logical negation of space: the spatial point. The point differentiates one space from another insofar as *this* point is identified or 'pointed out' as somehow distinct, a point *other than* the rest of space. A mere point, however, only 'ideally' or abstractly differentiates space, for one point is identical to every other point, and each is just a failed attempt at distinguishing one part of space from any other. In other words, the point is an entirely abstract differentiation of spatial extension. But once we understand that space is, in fact, not merely three-dimensional extension, but the unity of this extended being with its temporal *negation*, the logic of nature presents us with a more concrete version of the abstract point: the space that is here and *now*, at this spatial location *and* this moment in time. The temporal 'now' grants space what it did not have before, namely, *determinate* presence or what Hegel calls 'place'.[49] Unlike the abstractness and consequent interchangeability of this space 'here' and that space 'there', the spatiotemporal location in which a given 'here' is tied to a given 'now' achieves an ontological determinacy lacking in nature's previous attempts to determine itself concretely. For with a spatiotemporal place, we have affirmative being that is explicitly involved in the activity of negation: one spatiotemporal location *is not* that place *there*, but *is* this place *here*, *now*, and this is so precisely because it is *not* another place. (We should note that, despite time's collapse into spatial presence, the negativity of time continues to play a crucial role in nature's logical progression here. Such negativity will be the motor behind all subsequent development in the logic of nature.)

In § 261, Hegel seeks to further explicate the logic of place, and he claims that place involves two distinct aspects on account of the fact that it is the unity of space and time, and that both of these forms of nature's self-manifestation retain their unique logical characteristics even in their newfound unity. Insofar as place is spatial, it should be understood as 'indifferent singularity', a place that is undifferentiated from itself or continuous with itself;[50] but place is a unique or determinate place precisely in this 'indifference', since the negativity of time is intrinsic to this spatial indifference. In other words, place retains the affirmative character of space as extended being, but now as a particular concrete extended region: 'this space *now*'. And yet, because place is the unity of space *and* time, such a place would not be a true place if it did not express the full character of time as well, and not merely in the limited form through which the 'now' grants space ontological determinacy. Since time is the *negation* of space, the 'indifferent singularity' of place must be actively negated (and not just

made concrete or determinate). That is to say, 'this place' that is 'here' and 'now' must be negated such that 'this place' no longer *is*. Thus, time does not only grant spatial extension determinacy but also negates that determinate being via the passage of time.

But what happens to 'place' when it is negated in this way? Does the determinate spatiotemporal location simply disappear with the passage of time? To be sure, '*this*' place, '*here*' and '*now*' disappears. But place *as such* does not vanish, for we already know that nature necessarily involves determinate place, and the passage of time does not yield a return to either the undifferentiated extension of space or the nothingness of a non-extended future. Rather, with the negation of a particular place, *another* place arises in its stead.[51] In this way, place negates the place that it is, but place nevertheless endures, albeit as *another* place. Hegel calls this simultaneous negation of place and endurance of 'having a place' *motion*, for this logic describes a *change of place*. Thus, a specific place is negated and is replaced by a second place, which in turn is negated and is itself replaced by a third place. As Thomas Posch remarks, 'While time is a sequence of "now, now, now," motion is a sequence of the form "now here, then there, then there." '[52]

It is worth pointing out that 'change of place' does not exclusively signify the change of a place *here* to a place *there*, i.e., a change from one spatial location at $t_1$ to another spatial location at $t_2$. Since Hegel defines motion as 'change of place', and since place implicates both space and time, something like motion can also be found in states of rest. For a being at rest does not simply remain in its 'place'. On the contrary, a resting being changes its 'place' with respect to temporal duration: although the being at rest is here at $t_1$ and still *here*, as opposed to *there*, at $t_2$, some change is still occurring precisely insofar as the place that *was* here ($t_1$) vanishes and gives way to this place that is here *now* ($t_2$).[53] Although Hegel is not focused on this second type of movement, it is implicit in his account of change of place.

Whether we are considering locomotion proper or the less obvious form of movement at work in enduring, something must be doing the changing—not, necessarily, a 'something' (*Etwas*) per se, or even a 'thing' (*Ding*), but, according to Hegel, determinate *being* (*Dasein*) in some sense continues *to be* in motion. Indeed, there must be some determinate being, however vague at this point, that is *undergoing* the change of place that motion is. This is matter, i.e., that which persists in the movement from one place to another.[54] Now, this persistence within motion should not be understood as a material substance underlying and indifferent to accidental change. It is central to Hegel's thought that matter is just the 'flip side' of motion, the persistence of a determinate 'place' within the change of place, rather than the underlying *thing* that is independent of and more fundamental than

the process of its becoming. Therefore, whenever Hegel speaks of matter in the philosophy of nature, we should really understand this as *matter-in-motion*. As Hegel says, 'Just as there is no Motion without Matter, so too, there is no Matter without Motion.'[55] According to Hegel, that being continues through movement is logically necessary. Whereas motion is made necessary by the asunderness of nature (spacetime *negating* its unity and thereby distinguishing itself between *this* and *that* place), matter is made necessary by nature's *continuity*-with-self. As Hegel puts it, matter is the 'peaceful identity [*ruhende Identität*]' of space and time, and by this he means that matter is the place that *persists* in motion, the place that *moves* from one spatiotemporal location to another.[56]

Hegel makes it clear in the Remark to § 261 that the transition from space and time to place, motion, and matter is an utterly crucial step in the dialectic of nature, characterising it as 'the transition from ideality to reality, from abstraction to concrete existence (*konkreten Dasein*)'.[57] I take Hegel's remark here to indicate the possibility that his ontology of nature properly begins here, with the concepts of motion and matter. To be sure, everything that Hegel unpacks from the beginning of § 254 (i.e., space) onwards is central to the logic of nature. Unlike the introductory remarks (§§ 245–253) which point ahead to what *will* be derived in the philosophy of nature, § 254 and the subsequent paragraphs of the *Encyclopaedia* are meant to unfold the immanent logic of nature and thereby justify his ontology of natural forms. But we recall that Hegel's logic of nature began with the absolute Idea in its *immediate* self-externality. Space and time, considered in themselves, remain abstract on account of the extreme immediacy with which the philosophy of nature must begin, and they are therefore nothing other than the forms *through* which all natural determinations make themselves manifest in concrete reality. With the logical emergence of matter, nature achieves a certain concreteness that it previously lacked. As Hegel says, 'Matter'—and here Hegel is discussing matter and its motion—'is the first reality, existent being-for-self; it is not merely the abstract being, but the positive existence of space.'[58]

This point is of the utmost importance for Hegel's philosophy of nature. Matter-in-motion is the fundamental or base level of reality—space, time, and place being the more abstract determinations that logically necessitate the first 'layer' of natural being as matter-in-motion. Whereas space and time are the abstract *forms* in which all subsequent logical-natural determinations will express themselves, mobile matter is the *content*, the 'stuff' of nature itself that will go on, in the subsequent stages of nature's system, to prove to be formed into particular bodies with qualitative determinacy. Thus, for Hegel, there isn't anything that 'underlies' the material world, for matter is the primary manifestation of the Idea in its alienation-from-self. And this primary manifestation of the Idea is *concrete*, because it

is differentiated. Such differentiation does not yet involve any qualitative determinacy inhering in matter, for this will only come with the logical transition from mechanics to physics. At this stage, matter is determinate in a 'mechanical' sense: any given part of matter is different from every other part with respect to spatiotemporal distinctness. But all of the more complex determinacy that will arise in the remainder of the philosophy of nature has mobile matter as its 'base' level. Or, to follow Hegel in his move away from the algebraic terminology of 'potentiation': everything that occurs within the philosophy of nature will be a *moment* within a logical process immanent to *matter*. *Pace* the Marxist critique of idealism, then, there is nothing that exists for Hegel that is not in one way or another derivative of matter-in-motion.[59] Everything that he will consider in the philosophies of nature and spirit, from immaterial light to human thought (and, at its highest stages, art, religion, and philosophy itself), is made necessary by the immanent logic, and therefore being, of matter-in-motion. In this way, even the least material of ontological determinations are dependent upon the existence of matter.

Matter, according to Hegel, involves two key features: impenetrability and continuity. Following Kant and Schelling, Hegel explains impenetrability and continuity in terms of the repulsive and attractive activities of matter. He departs from Kant and Schelling insofar as he sees neither repulsion nor attraction as *forces*; instead, repulsion, for Hegel, is simply matter's activity of repelling other matter from occupying its place in spacetime, and attraction is the same matter's intrinsic *unity* with all other matter, i.e., the fact that there is no empty space existing *between* bodies.[60] The former is determined by the moment of nature's negativity, 'its abstract *separation into parts*', and the latter is determined by the moment of the sameness or indifference of these parts.[61]

One reason that Hegel rejects the idea that repulsion and attraction are forces is that, for Hegel, these immanent activities are logically separable but are not physically separate. On the contrary, repulsion and attraction are simply *moments* which pass over into one another.[62] By conceiving of repulsion and attraction as moments constitutive of matter, as opposed to forces involved in the latter's dynamic construction, one might think that Hegel is distancing himself from the Schellingian conception of matter. Yet despite rejecting the Schellingian language of force, Hegel does follow Schelling's Baaderian criticism of Kant by identifying gravity as a distinct determination of matter responsible for unifying the 'moments' of repulsion and attraction.[63] Below, I will consider the apparent difference between Schelling's and Hegel's conceptions of repulsive and attractive activity. First, it will be necessary to interpret Hegel's conception of their unity, namely, the gravitational motion expressed in free fall.

**Falling Bodies**

By § 262 of the *Encyclopaedia*, nature has proven to be spatiotemporally extended matter-in-motion, matter that is, on the one hand, discrete or separated into impenetrable parts, and on the other hand, utterly continuous, i.e., without any immaterial 'gaps'. But as we saw, discreteness and continuity are not unrelated features of matter, but two 'moments' that have their truth in their implicit unity, what Hegel calls singularity (*Einzelheit*) or subjectivity.[64] At this stage, such singularity—the unity of discreteness and continuity—has not determined itself as fully actualised being. Rather, according to Hegel, this singular being that is both *itself* (discrete) and *one with everything else* (continuous), is only posited by matter as an 'ideal' being in gravitational motion.[65]

We will need to consider the logic of gravity in order to shed light upon why Hegel identifies gravity as a merely 'ideal' subjectivity. But it is worth first considering why he identifies the unity of discreteness and extensive continuity as 'subjective' in any sense whatsoever, for it is by no means immediately obvious. According to Hegel, subjectivity is a distinctive way of being in which something becomes *what it is* through a relationship to that which is *other* than it. Note the significance of being what one *is* here. To be what one *is* is to be united with oneself *as a self*, i.e., it is to have some sort of self-identity. Unlike the sheer self-externality of spatial extension, then, subjectivity is an 'inwardness' that results from a unification with alterity. Now, it is in the logic of gravity that we discover the first signs that matter will express itself as 'subjective' in this technical sense, since gravity is the unity of material discreteness and continuity. Gravitational motion is therefore a profoundly important stage in Hegel's philosophy of nature. Moreover, because Hegel sees gravitational motion as entirely immanent to matter itself (i.e., as the unity of material repulsion and attraction), this stage in nature's logical development proves that inorganic matter, long before the logical emergence of organic life, posits subjectivity as its ideal *telos*. As we shall see in Chapter 7, organic and spiritual subjectivity are, for Hegel, more concrete forms of the logical structure of becoming oneself through a relation to what is other.

In order to show how Hegel understands gravity to be the 'essential motion'[66] wherein subjectivity first reveals itself in nature, we must consider how Hegel derives gravity from sheer material being. As we have seen, nature achieves a certain amount of determinacy in matter, and this proves, according to Hegel, that matter is 'the first reality'[67] or the first actual manifestation of spatiotemporal extension. But what *kind* of determinacy does matter have? At this stage, the only determinacy matter can possibly express is *quantitative*, for we are still working through the notion of nature as self-external being and thus a nature

without any unity-with-self in which qualitative particularity would be expressed.[68] To be sure, places—or bits of matter—are different from one another, but Hegel has yet to show why features of nature must necessarily be differentiated according to qualitative particularity. Therefore, one material place is distinct from another with respect to quantitative determinacy alone. According to Hegel, this quantitative determinacy is expressed as 'different quanta or *masses* which … are *bodies*.'[69] Thus, one material place is distinct from another insofar as that place is an individual body constituted by a specific quantum of material, i.e., its mass.

The quantitative determinacy of matter, however, is not limited to its mass. In his account of collision, Hegel aims to show that bodies that vie for the same position in space and time are not exclusively determinate thanks to their mass, but involve a further ontological characteristic: in colliding with one another, material bodies achieve a 'being-for-self against the other' and this, Hegel argues, implies a second quantitatively determinate feature of bodies, namely, '*weight* [*Gewicht*] as the *heaviness* [*Schwere*] of a quantitatively distinct mass.'[70] The material body is thus differentiated from other bodies not only in being constituted by a determinate quantum of matter (i.e., by its mass), but by its weight. For weight is necessitated by the fact that a body is not only determinate with respect to its *own* material, but is determinate with respect to its intrinsic relation to *other* bodies (i.e., 'being-for-self against the other'). In collision, this 'being-for-self against the other' is only implicit, but as weight or *heaviness*, matter explicitly manifests its quantitative determinacy as related to another body. And this is because, according to Hegel, heaviness is nothing other than the tendency of a body to fall towards another body thanks to its own weight. For this reason, Hegel sees the weight intrinsic to any given body as the cause of gravitational motion. Or, put more precisely, the weight or heaviness of a given body *just is* its inner movement towards a being beyond it. Gravity is this striving of a material body to unite with a mass greater than it, the phenomenon in which 'matter strives to get away *out of itself* to an other'.[71]

Now that we have a sense of Hegel's general conception of gravity and its logical necessity, we can gain clarity about why he identifies gravity as an 'ideal subjectivity' and as the unity of repulsion (discreteness) and attraction (continuity). Gravity is the *unity* of repulsion and attraction, because it is nothing other than the phenomenon in which *discrete* material bodies seek *unity* or ontological continuity with *other* material bodies. It is important to note that gravity is not *mere* unity or ontological continuity (attraction) but *unity-in-difference*. It is in this way that gravity is the identity of attraction and repulsion, for it involves continuity *and* discreteness. Only a discrete material body can fall towards *another* body, itself distinct, in search of material unity-in-difference. When terrestrial bodies

fall towards the earth on account of their heaviness, they express their yearning to achieve this new form of unity.[72]

That bodies seek unity is significant. But we should note that, although subjectivity is posited here as an end, it is not in fact *achieved* in free fall. Unlike the animal organism and even less like the human spirit—both of which will prove to be far more concrete expressions of subjectivity—gravity is only an *ideal* subjectivity. Indeed, because self-*externality* is still the dominant logical form in the sphere of mechanics, the unity sought in gravity is *merely sought*. Bodies long to unite with other bodies, but this is a perpetual longing; the inner unity of repulsion and attraction is never fully achieved. In fact, the total unity that falling bodies seek could never be achieved: were all bodies to realise this unity completely, they would collapse into a single point and no longer *be* the material or extended beings they *are*.[73] Gravity, then, is a limited form of subjectivity, and 'falling is [only] *relatively* free motion',[74] a 'half-free motion [*halbfreien Bewegung*]'.[75] Such descriptions of free fall are meant, in part, to point out the fact that a falling body does not raise *itself* to a height in order for it to fall; the *freedom* of falling is only 'relatively' free because a body must first be raised by something external to it.[76] But there is a second sense in which free fall is only a 'half-free motion', and this has to do with the fact that, in gravitational motion, bodies seek a centre *beyond* themselves in order to achieve selfhood. That is to say, falling is 'relatively' free—not absolutely free—because bodies aim at unity-with-self by moving *beyond* themselves. We will see that, in the organics, something similar is at work in the life of plants. Here, in mechanical nature, we see that a body tends towards unity with other bodies, but that it does so by perpetually seeking its 'self' beyond itself.

It is important for us to keep in mind, however, that despite the fact that terrestrial bodies fail to achieve real and concrete selfhood in gravitational motion, this is indeed the logically first moment in which such selfhood is posited as an aim immanent to matter.[77] The more concrete forms of subjectivity that we see in animals and human beings are logically, and therefore ontologically, dependent upon this longing within matter to achieve selfhood in relationship to that which is other than it.[78] For it is only *through* the logic of free fall—in which subjectivity is first posited as nature's *ideal*—that nature's logical progression *ever* arrives at a form of subjectivity that does in fact determine *itself* as free, subjective being.

On this reading of Hegel, the more 'abstract' forms of nature are not *simply* abstract; they also logically necessitate the more concrete forms of nature. And as I argued in Chapter 4, because logic is ontology for Hegel, logical relations signify ontological relations. Indeed, it is the rational or ontological poverty of abstract forms (e.g., space, time, motion, matter, gravity) that *does the necessitating* on the way from nature to spirit. It is

therefore a fundamental claim of this book that Hegel conceives of inorganic, selfless matter as the very being that makes organic and spiritual subjectivity possible. And it is for this reason that, *pace* Pippin, I see the philosophy of nature as absolutely central to Hegel's philosophical enterprise and as a necessary propaedeutic to any philosophical investigation of human subjectivity.[79]

Setting aside the language of selfhood and subjectivity, we also learn from this part of Hegel's mechanics that matter and motion are even less separable than we had previously thought. We have already seen that matter is immanently mobile for Hegel. Now that we see the immanent longing of bodies to unite with other bodies, matter and motion prove to be all the more inseparable: matter is not only necessarily in motion, but it is *self-moving*—with the important caveat that this 'self-movement' is, at this stage of nature, lacking fully explicit 'selfhood'. Hegel's point is not that a material body moves itself *whenever* it changes place. Rather, his point is the following: even in rectilinear motion, it is an abstraction from the concrete reality of matter to conceive of a material body as inert *and nothing further*. To be sure, Hegel grants that, in collision, a body's velocity changes thanks to impact with another body, and neither body moves *itself* in such an event. Matter, insofar as it expresses itself abstractly, allows itself to be moved from without, hence Hegel's account of inertia and his subsequent discussion of pressure and thrust, 'the two causes of external, mechanical motion'.[80] Yet because such inert matter is ontologically abstract, the philosopher of nature fails to grasp the concrete truth of matter if she reifies this abstract matter and conceives of contact with an external body as the exclusive impetus for motion. In other words, we fail to comprehend the motion of a body in its full actuality if we abstract the motion that derives from mechanical contact away from gravitational motion, the latter of which is always operative. For Hegel, material bodies are not simply inert; they intrinsically drive themselves beyond themselves in free fall. Moreover, this activity is not accidental or contingent; to be driven beyond oneself is what it is to be a heavy, material body. Thus, Hegel is critical—as are Kant and Schelling before him—of the Newtonian conception of gravity as contingent with respect to matter, and he argues that matter can be understood to change its own velocity by simply being *heavy*.[81]

I mentioned above that, although Hegel follows Kant and Schelling on this matter, he does not himself understand repulsion, attraction, and gravity as forces. According to Hegel, the central problem with conceiving of material activity in terms of force is that such a term implies that a given force is not only conceptually but physically distinct from the bodies upon which it acts. This is the case, on Hegel's view, whether the forces of repulsion and attraction are seen as external or internal to matter. For a matter

that '*has* these two forces *in itself*'[82] is still in some sense distinct from the repulsive and attractive activity that dwell within it. When thinking in a dynamist fashion, matter is not seen—as it should be—as simply *being* the dual activity of repulsion and attraction. And for Hegel, matter just is impenetrable and continuous: it occupies space and thereby repels other matter from its place; and it is simultaneously continuous with itself, for there is no immaterial space. In this way, repulsion and attraction are not forces external *or* internal to matter, but the fundamental activities of matter itself. Moreover, according to Hegel, 'force' implies that one force is physically separate from another. As he puts it, 'Regarded as forces, [repulsion and attraction] are treated as self-standing and therefore not as referring to each other by nature.'[83] But as we have seen, repulsion and attraction are not distinct physical *existences*, but are, rather, the immanent activity of matter itself, features of one and the same being. This identity of repulsion and attraction is apparent in the free fall of terrestrial bodies that seek to *unite* with other matter (attraction) while remaining discrete and impenetrable (repulsion).

In all of this, Hegel is in explicit conversation with Kant. According to Hegel, despite Kant's commitment to providing a metaphysical grounding for Newtonian science, he already saw the limits of the Newtonian conception of attractive force as a contingent phenomenon with respect to matter. In the *Metaphysical Foundations*, Kant argues that attraction is necessary if matter is to fill space; for without attraction counteracting repulsion, matter would be repelled outwards *ad infinitum*.[84] For Hegel, this recognition of the immanence of attraction to matter is paramount, since it proves that attraction cannot be in any way *other* than matter—it is simply the activity through which matter expresses its continuity-with-self. Thus, despite Kant's identification of repulsion and attraction as forces, he helps pave the way for a more rational comprehension of what matter *is*. This is why Hegel remarks that Kant's discussion of the fundamental forces 'must always be highly esteemed'.[85]

Kant, however, fails to see that repulsion and attraction are themselves aspects of a more essential *identity* at the heart of matter. In this way, 'his two fundamental forces remain external, *independent of each other*.'[86] The criticism of Kant here should appear strikingly familiar, and although he does not mention either Baader or Schelling by name, it is hard to imagine that Hegel is not following their line of thought. For Baader, Schelling, *and* Hegel, Kant's construction of matter, for all its merit, is fundamentally flawed insofar as it fails to see the essential unity of repulsion and attraction.[87] And as we saw in Chapter 2, Kant fails to see this unity because, following Newton, he identifies attraction with *gravity*. For Baader, Schelling, and Hegel, gravity is distinct from attraction, for it is the very phenomenon which proves the *identity* of repulsion and attraction.

Terrestrial bodies are not pulled to the earth by a gravitational force external to them, nor do they have some inner force that is separate from their *being* as the distinct bodies they are. Bodies, as heavy, simply seek to unite with other bodies from which they are distinct and with which they are continuous.

As I understand it, then, Hegel is far closer to Schelling on this issue than it appears at first glance, given the latter's dynamist sympathies with respect to the concept of matter. The Kantian-Schellingian dynamic construction of matter is an attempt to logically derive the necessary conditions of the possibility of matter. We are not left, at the end of this construction, with matter and its separate conditions, but with the essential features of matter itself. Thus, on my reading, the fundamental difference between the Schellingian and Hegelian conceptions of matter does not reside here. The fact that Schelling uses the language of force to describe repulsion and attraction (and the fact that Hegel does not), does not signify a difference in their account of what matter *is*. It does, perhaps, hint at a more fundamental difference in their nature-philosophical tendencies: whereas Schelling is, time and again, drawn to different ways of understanding nature in terms of power—conceiving of nature as active, productive, creative—Hegel understands nature in terms of impotence, self-externality, and negativity. As I will argue in Chapter 8, this has significant consequences for how each of them views the history of nature. It is possible, then, that their being divided on the usefulness of the terminology of force can give us an oblique view of their actual philosophical difference.

We can return for the time being, however, to Hegel's logic of gravitation. The immanent fall of material bodies signals the intrinsic longing of nature to shed its sheer self-external character and unite with itself—indeed, to *become* a 'self' in the first place. Yet because the centre towards which bodies fall lies beyond those bodies, the activity of falling does not express a fully realised form of self-determination. But not all material bodies fall towards a centre outside them. Some bodies gravitate continuously *around* their centres, and in doing so achieve the active being of 'subjectivity'. In the following section, I consider Hegel's discussion of such bodies.

### Celestial Motion and the Mechanical Stirrings of Real Freedom

In the orbits of the planets around the sun, Hegel identifies the more robust expression of inorganic freedom that was only implicit in the logic of free fall. For the planets do not fall towards a centre outside them, but remain in perpetual motion around two centres, the foci of their elliptical orbits. In the third and final section of the mechanics, entitled 'infinite mechanics', Hegel considers the motion of the planets in detail.

By distinguishing between 'finite' and 'infinite' mechanics, Hegel follows the ancient cosmology, likewise embraced by Schelling in the *Bruno* and the *Further Presentations*,[88] which describes terrestrial motion as ontologically distinct from and less perfect than the motion of the celestial bodies. It is important to recognise, however, that Hegel's intention is not to claim that there are *two realms* of nature, an 'above' and a 'below'. This would be antithetical to everything Hegel fought for in the name of metaphysical immanence. Hegel's point is rather that we misunderstand the being of matter if we assume that all material bodies have their centre of gravity beyond themselves and always only *long* to unite with that centre, without ever achieving selfhood through self-determining motion. For Hegel, not all matter acts in this way, for at the macrocosmic level, material bodies are in fact self-determining such that they do not seek a centre *beyond* themselves, but orbit freely in space and time. It does not follow from this, however, that there is a line separating the celestial and terrestrial motions. Instead, Hegel aims to show that falling bodies play a role in a larger mechanical structure, and that we can differentiate the being of this larger structure as a whole (the solar system) from the terrestrial bodies that move *within* that structure. It is for this reason that Hegel praises Newton's law of universal gravitation; it demands—even if it does not, according to Hegel, satisfy this demand—that free fall and the planetary orbits be conceived of through gravity alone. Gravity, for Hegel, can explain both terrestrial and celestial motion.[89] That being said, gravity expresses itself *differently* in earthly and celestial bodies. For, as the ancients saw, the celestial bodies 'turn back into themselves' and thereby achieve a certain degree of self-reference. And insofar as the planets perpetually remain in this self-referential motion, they exhibit a certain degree of self-sufficiency.

According to Hegel, the ontological specificity of the whole mechanical system is expressed clearly, and beautifully, in Kepler's laws of planetary motion, and from an early age Hegel was intent on elucidating the philosophical significance of these laws.[90] In particular, Hegel is intent to show how the elliptical orbits of the planets express the intrinsic freedom and individuality implicit in the self-externality of nature.[91] This should already signal that Hegel's identification of the planets as exhibiting freedom in their 'absolute motion' is not a simple return to ancient cosmology. Indeed, the freedom exhibited in planetary motion is not the perfect, selfsame freedom of *circular* motion, in which a body returns to itself undisturbed. On the contrary, true freedom for Hegel—in its mechanical, organic, and spiritual forms—requires that free being *differentiate* itself from itself and only subsequently 'return' to or 'turn back' onto itself and thereby *become* a self. And whereas an object travelling in a circular orbit indeed 'turns back' onto itself, there is no geometrical moment of *difference* in such an

orbit, since the radii of the circle are all of equal length. With an elliptical orbit, by contrast, the trajectory of a body is geometrically differentiated. It is therefore, according to Hegel, only with the Keplerian discovery of the elliptical orbits of the planets that the celestial realm proves its genuine freedom, i.e., its freedom in difference.

But how does matter determine itself to move elliptically? According to Hegel's lengthy Remark to § 270, the elliptical orbits are necessitated by the fact that, in gravitational motion, space and time become 'free' with respect to one another and thereby enter into a new relationship.[92] If space and time are expressed as what they *truly* are, namely, as a unity in which their respective logical characteristics are made manifest, then even *space* must involve genuine difference (and not merely the immediately affirmative being that is self-externality).[93] Thus, the perfect motion, i.e., the motion most expressive of the being of nature, is not the line simply turned back on itself in which all radii of the orbit are of equal length (circular motion). Rather, the perfect motion involves a 'turning back into oneself' through a spatially differentiated process, such that an orbiting body traverses an ellipse whose radii are of different lengths (elliptical motion).[94] That the ellipse has two foci instead of one is further confirmation of the fact that the ellipse is a more differentiated and therefore concrete orbital path. Hence Kepler's first law of planetary motion, which states that planets orbit the sun elliptically.[95]

But this is not the only reason Hegel sees Kepler's account of planetary motion to be significant. Hegel understands there to be profound rational insight in how Kepler's three laws hang together, and he is at pains to make explicit the logic at work in the unity of those laws. Kepler's second law states that, in a planet's orbit, a line segment connecting the planet to the sun sweeps out equal areas in equal times.[96] According to Hegel, this is made necessary by the fact that, despite the ontological difference expressed in an ellipse, unity persists; even *time*, then, must express the kind of continuity that defines space. Thus, the planet sweeps conic sections of equal areas in equal quanta of time. And finally, Kepler's third law, which relates the cube of distance traveled in orbit to the square of the time traveled, is best understood as the unity of the first and second laws (the unity of difference and unity).[97] For in the third law of planetary motion, it becomes clear that the differences between space and time are themselves fully united. On Hegel's view, the logic at work here is that time freely relates to itself and therefore *squares* itself, while space, which already involves three-dimensionality, *cubes* itself in *its* self-relation, and that these two determinations are *themselves* related in the motion of the planets.[98] Space and time therefore don't only express their ontological distinctness, as they did at the beginning of the mechanics; nor do they simply take on the distinctness of one another, as they do in the first and

second laws of planetary motion. Now space and time express their logical distinctness in relation *to themselves* and in relation *to one another*: time *squares* itself and space *cubes* itself and these two magnitudes are intrinsically related to one another in the orbital path.

According to Hegel, the motion of the planets realises the unity (or identity) of identity and difference. And as we know, this is the most basic definition of freedom for Hegel: to become what one is through a process of self-differentiation. We saw that such selfhood was posited as a *telos* by heavy bodies in their free fall. In a planet's orbit around the sun, selfhood is actually and perpetually realised, and this is why Hegel identifies the planets as the ontologically primary expression of freedom in concrete reality, 'the most perfect' of the celestial bodies.[99] Planets move *towards* a centre beyond them (the sun) and yet do not simply fall towards that centre, but return to themselves. Because planets are both intrinsically related to their sun and self-sufficient in this very ontological dependence, planetary matter is 'an unresting whirlpool of self-relating motion'.[100] And such motion, according to Hegel, is nothing less than *mechanical subjectivity*. For subjectivity is an activity of *self-relation* that is made possible only through a process of self-*differentiation*. It is in this unique form of gravitational motion, then, that we first glimpse not only the 'ideal' of subjectivity (as in free fall) but actual self-determination in the form of free motion.

I want to emphasise Hegel's insistence on the fact that freedom expresses itself here in *mechanical* nature, however rudimentary such freedom is at this stage. It is a prevalent view, held by both critics and defenders of Hegel's system, that Hegel is fundamentally opposed to mechanical explanations of nature and of being more generally. This common assumption goes hand in hand with a certain image of Hegel as an 'organicist'. It is true that Hegel sees the mechanical features of nature as less concrete instantiations of reason than the organic features of nature. It is also true that Hegel sees the whole of nature as a self-developing system that, as a totality, has more in common with an organism than it does with a mechanical aggregate of parts. But, importantly, there is nothing living in nature's fundamental stages of development, i.e., in the mechanics and the physics. What is more, even the first stirrings of freedom in nature appear as sheer matter-in-motion. In line with his commitment to presuppositionlessness, Hegel rejects the idea that we should come to the philosophy of nature with the intention of championing some 'organicist' worldview. This is why he insists that we come to the realisation that nature is a rational system of stages involving, at the highest levels, organic life *only* through a careful interpretation of *mechanical* nature. Indeed, we can only begin to understand the concrete reality of organic life if we attend to the manner in which nature *already* expresses the rudimentary forms of rational,

self-determination in mechanical motion. This means that the mechanical is not simply denigrated in Hegel, but is identified as the very source of the organic forms of nature and spirit. That nature proves to be *more* than mechanical does not mean that mechanical nature is 'written off' or merely 'negated' in Hegel's system. Rather, sheer matter-in-motion *sublates* itself in the emergence of life and spirit: it requires, of its own inner necessity, that there be other, more concrete forms of freedom in the world.

That Hegel, in the mechanics, already identifies forms of self-determining subjectivity might raise worries about there being a kind of spiritualist monism here, as if Hegel were saying that the very thing that makes spirit *spirit*—freedom—is to be found in nature. But I think these worries are unfounded. Hegel is adamant that nature is not itself spiritual and that it is only a 'basic' or 'primitive' form of consciousness that sees the full manifestation of the divine in natural forms.[101] But this does not mean that nature is wholly devoid of freedom or that it is entirely lacking what religion represents as divinity. For while 'the stars are only a gleaming leprosy in the sky',[102] the planets that orbit the sun express an intrinsic freedom and can therefore be called 'blessed gods'.[103] We must, therefore, be sensitive to Hegel's ideas with regard to nature: On the one hand, it is foolish to see spirit *in* nature, as if natural forms achieved anything comparable to the form of human freedom. On the other hand, nature is the first expression of the absolute Idea or self-determining reason, and *as such*, nature will necessarily manifest itself as self-determining freedom, however crude or nascent these expressions may be. Moreover, it is only *through* such primitive expressions of freedom within the realm of mechanical, physical, and organic nature that the highest forms of freedom—those forms enjoyed in the life of spirit—are made possible and necessary.

Assuming these remarks address worries that Hegel has 'spiritualised' nature, there is a second worry that we might address, and that is that using the language of 'freedom' in the realm of mechanics might seem to be a poor use of metaphor. Does Hegel really mean that the planets *freely* orbit the sun? I believe he does. Here is the passage in which Hegel describes the planets as 'blessed gods': 'The motion of the celestial bodies is not any such pulling this way and that but is free motion; they go on their way, as the ancients said, like blessed gods.'[104] Freedom here just means that what something does issues from what something is. Against the Newtonian, Hegel argues that the planets move because of what they are; gravity is not accidental in relationship to these bodies. So there is freedom here, but it has nothing to do with the freedom of choice or the ability for the planets to move in different ways than they move.

We can also understand the freedom of the planets as a genuine form of freedom—and yet nothing close to the freedom enjoyed by human

beings—by recognising in Hegel's preference for Kepler over Newton an implicit critique of the idea that nature follows laws that transcend it. 'The laws of nature are themselves nature's immanent essence.'[105] Not only is the Newtonian confused when she attributes motion to a gravitational pull on material bodies; but the *laws* of motion are entirely intrinsic to the planetary bodies, and this too the Newtonian fails to comprehend. According to Hegel, the logical structure that determines motion in the universe is intrinsic to matter—indeed, reason *is* matter. What happens in celestial motion, therefore, does not occur thanks to some rational laws of nature that transcend the planets any more than this motion occurs thanks to the activity of a transcendent God. The planets are autonomous, freely giving themselves their laws of motion. In this respect, even terrestrial matter is intrinsically self-determining insofar as it is the nature of matter itself which determines that it will be moved passively by other bodies in collision.

Formally then, there is real freedom in mechanical nature. But this does not mean that the *content* of mechanical self-determination is anything analogous to the kind of self-determination achieved in human life. On the contrary, the determinacy involved in celestial autonomy doesn't come close to the determinacy at work in human autonomy. For celestial autonomy is limited to self-*movement*—hence my repeated insistence upon the *mechanical* nature of this most basic expression of subjectivity. There is something vaguely 'divine' in this self-movement, because it is absolutely autonomous motion. Truly concrete divinity, however, the divinity present in human history, will dwarf the divinity exhibited in celestial motion, for the human spirit is self-determining not only with respect to movement but with respect to feeling, thinking, and acting.[106]

That being said, the 'higher' and more complex forms of freedom enjoyed by the human spirit are only made possible by the self-movement of the planets. And thus, we must consider in more detail the manner in which celestial bodies express subjectivity on Hegel's view. For it is through a consideration of this mechanical subjectivity that Hegel completes his account of mechanical nature and moves on to consider the physical qualities that constitute the natural world (physics), the life of the self-determining organism (organics) and, finally, the fully rational and self-determining freedom of the human spirit (philosophy of spirit). Why is it, then, that the next stage of nature is no longer mechanical? What is it about the freedom achieved in the motion of the planets that necessitates a further stage of nature, one that involves something more than matter-in-motion?

In the self-determining motion of the planets, material bodies have proven that they are not only self-external beings, but self-*identical* beings, particular beings that are related to themselves as having some intrinsic unity that not only persists, but is achieved, through a process

of self-differentiation. In mechanics, however, nature is utterly external to itself; there is no intrinsic nature, but extension pure and simple. Yet such extended being does not only long for intrinsic selfhood (free fall) but arrives at this selfhood in the motion of the planets. And in doing so, nature proves that it must involve more than strictly mechanical motion. This 'more' is expressed, first and foremost, as a *solar system*, i.e., a systematic unity of individuated bodies:[107] 'Universal corporeality essentially sunders itself into *particular* bodies and achieves self-completion in the moment of *individuality* or subjectivity as manifested existence in *motion* which thus is immediately a system of *several bodies*.'[108]

There are two features of the solar system that will help us grasp the transition from mechanics to physics. First, we can note that the solar system is indeed a *system* of bodies, as opposed to being a mere aggregation of bodies, and that this is because they 'stand in relation to each other'.[109] To 'stand in relation' here suggests that the bodies in the solar system are not related contingently but in a rational manner. The solar system is precisely a system insofar as it is composed of self-determining, self-moving individuals that are rationally related to one another, a fact expressed, according to Hegel, in Kepler's third law of planetary motion. Thus, insofar as the solar system is a system of rationally related individuals, there is a rational structure within nature that is not reducible to nature's sheer self-externality; the full significance of such organisation cannot be reduced to mechanism (even if we first glimpse this reality within the domain of mechanics).

The second significant feature of the solar system, for Hegel, is that it is composed of *individual* bodies. As we have seen, the planets are self-determining individuals, but with Hegel's description of the solar system we learn something further about the *particularity* of these individuals. As Hegel says, matter '*sunders* itself into particular bodies'. Unlike the local level of terrestrial mechanics in which material bodies are extensionally continuous with one another, the solar system forms itself in such a way as to create empty spaces and therefore physically distinct, individual bodies. The ontological continuity of matter is therefore interrupted in an important sense here. On the Earth, there are no immaterial 'gaps', space that hasn't been 'filled' by matter. But things are different at the macrocosmic level of mechanical activity, where empty spaces are central to the motion of the individuated planets. Such 'interstellar distances […] have no filling, but are mere negations of union.'[110] It is this feature of the solar system that signals the substantial physical particularity of celestial bodies and necessitates the transition from speculative mechanics to speculative physics (in the narrow sense), i.e., the part of the philosophy of nature that considers the *particular* natural processes that qualitatively distinguish one body from another.[111]

**Self-Formation as Qualitative Differentiation**

From the very first stages of nature, matter has shown itself to be immanently mobile in successively more impressive ways. Although material bodies express their ontological abstractness when they are passively moved by other bodies, we recall that even this movement is in another respect expressive of an activity immanent to matter, since matter determines *itself* to be moved from without. Indeed, matter *just is* its movement from place to place. Then material bodies proved to explicitly long for selfhood in their heaviness. Now we have seen that, in the planetary system, matter forms itself into bodies that are in fact 'subjective' insofar as they freely determine themselves in their movement. At the end of the mechanics, Hegel claims that when matter determines itself as genuinely free, such matter achieves 'determinateness of form'.[112]

In what sense is the 'free motion' of the planets connected to the determinate *formation* of matter? According to Hegel, the freedom of the planets signals the self-formation of matter, because in this freedom we confront a new kind of ontological determinacy, namely, 'qualified matter' or qualitatively distinct material.[113] The logic here has resonances with Hegel's logic of measure found in the *Logic*. In measure, an increase or decrease in quantity can give rise to qualitative change. For example, if chilled to zero degrees centigrade, the quality of water changes from a liquid to a solid.[114] In Hegel's absolute or celestial mechanics, what appear to be purely quantitative changes in motion—such as a planet's acceleration as it nears the sun and deceleration as it gains distance from the sun—implicitly involve qualitative determinacy. For in the gravitational motion of a planet, the material body in question no longer seeks its identity *elsewhere*, but rather freely *remains what it is*, orbiting the sun as an embodiment of pre-spiritual freedom. In this 'remaining what it is', matter begins to sublate its self-externality, turning inwards as a qualitatively distinct 'self'.

As a 'self' distinct from but intrinsically connected to other 'selves', a planet is a determinate being which is in no sense interchangeable with other beings. Prior to this stage of nature, material determinacy was limited to its place in space and time, its mass, weight, and velocity. In other words, material bodies were distinct from other bodies with respect to quantitative differences alone. But once the celestial bodies—and the planets in particular—form themselves into a system of individuals intrinsically related to one another, a new kind of ontological determinacy is at play. The 'selfhood' expressed in a planet's orbit signifies that its being is ontologically unique and therefore 'qualified matter'. Now, because Hegel rejects an ontological separation between celestial and terrestrial material, it becomes apparent that this newfound qualitative determinacy must be

found throughout the natural world. In Hegel's words, 'The determinations of form which constitute the solar system are the determinations of matter itself and they constitute the being of matter.'[115] After all, the stuff here on Earth is part of this planet, and so the qualitative particularity exhibited by the planet as a whole should be found among earthly things as well.

The logic that has unfolded in celestial mechanics thus has important ramifications for the remainder of the philosophy of nature. For in the orbits of the planets, not only does matter move itself, but it also organises itself into material bodies Hegel calls 'totalities'.[116] And it is here, in a form of movement that is no longer mere change of place (i.e., motion) but the immanent organisation of matter into self-identical 'totalities', that Hegel sees the logical emergence of qualitatively distinct matter. By 'totality', Hegel does not mean that the planets each individually include *all that there is*; the planets cannot be all-encompassing beings, because there are of course multiple planets, as well as stars, moons, and comets. Instead, 'totality' is meant to signify the fact that the planets, while related to what is beyond them, are also self-sufficient; they do not depend for their motion upon a being beyond them, but simply 'go on their way, like blessed gods'. Indeed, unlike the 'half-free motion' of free fall, in which an object must be placed at a height in order to display its immanent longing for unity,[117] the celestial bodies depend in no sense upon another body to place them in the heavens.

There is another sense in which the planets and their more abstract counterparts (stars, moons, and comets) can be understood as 'totalities', and this latter meaning of 'totality' helps drive home the point that the uniqueness of the celestial bodies does not put them above and beyond terrestrial nature. According to Hegel, everything that will emerge in the remainder of the philosophy of nature will appear within this system of bodies. 'The deepening of Nature is nothing but the progressive transformation [*Umbildung*]' of solar, lunar, planetary, and cometary bodies.[118] In other words, while no one 'totality' is 'all-encompassing', the *totality* of celestial 'totalities' is, in a sense, all-encompassing matter. Sound, heat, life—everything that will emerge in nature from this point on—does so through the 'progressive transformation' of the celestial bodies themselves.

This is why the next stage of the philosophy of nature will not be a broadening of the scope of mechanics. Mechanical nature has taken us as far as it will go while still remaining sheer matter-in-motion. Now that matter proves to be in motion in such a manner as to be qualitatively distinct, we must consider nature from another perspective. Indeed, we must consider nature from the perspective of the particular qualities that distinguish one part of nature from another. Hegel calls this 'physics', and it comprises the second and largest part of his philosophy of nature. In

physics 'what matter is, it is only through its qualities.'[119] Every determination in the physics will be defined by certain qualitative distinctness. It's significant that the impetus for moving beyond a mechanical framework in the philosophy of nature is *not* the recognition that organic life eludes mechanical explanation. There is no appeal to life in the transition from mechanics to physics. Rather, it is qualitative particularity that signals the failure of the mechanical worldview to account for all of nature's phenomena. For nature involves a plethora of qualitatively distinct processes—inorganic 'selves'—all involving concrete logics to be outlined in the physics. And while there is nothing in nature's wealth of particularity that will achieve the self-sufficiency of planetary motion (until we arrive at the proto-organic structure of geological development), matter has proven to necessarily involve qualitative particularity and it in this way raises itself above sheer motion.

To reiterate: the Hegelian cosmos does not begin, logically speaking, as qualitatively differentiated. Rather, such differentiation occurs, by necessity, thanks to the inner activity of matter, by matter's gradual process of turning into itself or 'involution'. Matter has, Hegel says, 'resolved itself into form.'[120] Of course, matter does not 'resolve itself into form' *in time*. Hegel is only interested in elucidating the *logical* emergence of qualitative particularity in nature and warns his audience not to confuse this logical emergence with the 'nebulous' idea of historical metamorphosis.[121] Nevertheless, the order of ontological dependence should be clear: matter is formed into particular, determinate bodies because this is what it necessarily means to be *material*; the intrinsic being of matter logically requires that it take on form.

### Emergent Immateriality: Light

The transition from mechanics to physics involves an important shift in logical focus. At the end of the mechanics, Hegel considered the solar system as a whole, i.e., nature in its ultimate configuration as matter-in-motion. But because the solar system is constituted by material bodies that determine themselves as freely moving beings ('totalities'), we must now consider the qualitative determinacy that nature necessarily involves, thanks to the logic of planetary motion. In Hegel's words, 'what the solar system is as a whole, matter is now to be in detail.'[122]

One might think that the first stage of physics, therefore, might unpack the logic of an even more concrete, self-determining being. But the dialectic of nature is more complicated than this. To cut a long and very complicated story short: Hegel will not consider a logical-natural determination as concrete as celestial motion until, at the beginning of the organics, he considers the earth as the ground upon which life flourishes.

Prior to this, Hegel unpacks the logic of a number of physical qualities that distinguish individual natural entities and processes from one another. The first of these—and the first stage of the physics—is light.

One would be wrong to assume, therefore, that Hegel sees light as ontologically *higher* than the motion of the planets. Hegel is absolutely clear that the planets, as the highest and most concrete form of mechanical nature, are more expressive of rationality and freedom than light is in either its individuated forms (the sun and stars) or in its more general reality (light as such).[123] Implicit in this privilege of the planets over light is an important lesson regarding the *Stufenfolge* of nature: not every stage will be 'higher' or more expressive of rationality and freedom than the one that precedes it. While light is *explicitly* qualitative nature, and in this way makes an advance upon the implicitly qualitative individuality of the celestial bodies, light is also qualitative nature *in its generality* and is therefore an utterly abstract stage of nature when compared to the concreteness of celestial motion.

Light is therefore yet another stage along the way to nature's full embodiment of rationality and freedom, and the particular way in which nature sublates its self-externality in the phenomenon of light is of great importance.[124] In the mechanics, nature's self-external being gradually turned in upon itself, constructing mechanical 'subjectivities' or 'totalities'. As self-determining individuals with implicit qualitative determinacy, the nature of these celestial bodies demanded that the philosophy of nature now explicitly consider qualitative distinctness. Self-externality (*Außersichsein*) has turned back upon itself and become inwardness (*Insichsein*), the first explicit instance of which is light.

The dialectic of physics begins with § 275, which states that 'matter in its first qualified state is *pure identity*-with-self, unity of *reflection-into-self*, and hence the first, still quite abstract *manifestation*.'[125] The concept of manifestation is especially important here. Indeed, 'light [...] is nothing but a *making manifest*.'[126] As I understand it, Hegel's argument goes as follows: Nature determines itself as being-within-itself, as identity-with-self in such a manner as to involve particularity or qualitative determinacy. For being-within-self to genuinely express qualitative determinacy, this determinacy of form must be made *manifest*, it must *appear*. And the most general way in which beings appear is in their being *shown*, in their simple shining (*scheinen*) in the light of day. The first and most basic physical quality of nature, therefore, is the light that makes such appearing possible, the making-manifest of matter.

We have already seen how 'manifestation' is an essential characteristic of nature as a whole. In Chapter 4, I interpreted nature in Hegel's system as the fundamental or primary manifestation of the Idea (or reason). Now we arrive at a specific determination *within* nature that

is distinctive on account of its activity of 'making-manifest'. Thus, if matter is the fundamental manifestation of reason, light is the manifestation *of* this manifestation. To be sure, the other logical-natural determinations are also manifestations of nature, itself the primary manifestation of reason. But light is unique insofar as it is not only *a* manifestation of nature, but the paradigmatic form of manifestation in that it has a kind of being of its own apart from that which it makes manifest. As Hegel says:

> Gravity, acidity, sound are also manifestations of matter but not, like light, pure manifestations, for they contain specific modifications within themselves. We cannot hear sound as such, but only a specific tone, that is higher or lower; nor can we taste an acid as such, but only specific acids. Only light itself exists as this pure manifestation, as this abstract unindividualised universality.[127]

Light is a 'making manifest' that has a reality of its own. It is therefore something like manifestation pure and simple.

As the 'pure manifestation' of matter, light is in one respect distinct from the matter it brings to light. This is why light is unlike acidity, which cannot be tasted 'as such'. An organism with the sense of sight can see not only visible objects but light *as such*, for light is phenomenal in itself, separate from the material bodies it shines upon. And yet there is no manifestation of matter without *matter*. Light fails at its making-manifest—it fails at being what it is—if there is nothing *there* to make manifest. Pure light can be seen, but in such seeing nothing determinate is given to vision. Light therefore requires matter in order to be the manifesting activity that it is. Thus, light is at one and the same time distinct from and entirely one with material nature. In Hegel's words, light 'enters into community with all and yet abides in itself, so that the self-subsistence of objects is in no way affected by it.'[128]

To fully understand Hegel's point about material bodies being unaffected by light, it is important to recognise his opposition to corpuscular theories of light. This opposition is one of the reasons Hegel considers light to be a physical as opposed to mechanical phenomenon. For light can no more be conceived of as divided into quantitatively distinct rays, or bundles of rays, than it can be 'packed into bags'.[129] According to Hegel, therefore, nature's being-within-self is first expressed as a certain *immateriality*: 'Light is incorporeal, in fact, immaterial matter; this seems a contradiction, but this can be of no consequence to us.'[130] Light is materially-dependent immateriality, the physical visibility or becoming-manifest of matter which is not itself material. According to Hegel, any description of light that ignores its immaterial character will fail to explain anything.[131] Indeed, if light

were itself material, 'a dense confused mass would be formed between the eye and the object, and from such a theory one ought rather to expect invisibility than an explanation of visibility.'[132] Light, for Hegel, is ontologically distinct from the material world as we've understood it thus far. As Hegel puts it: 'Matter is heavy in so far as it still seeks unity as place; but light is matter which has found itself,'[133] and thus, 'light is absolutely weightless'.[134]

That light is a weightless and therefore 'immaterial matter'[135] does not, however, make light into something that floats away from nature into some supernatural realm. The immateriality of light is not only a material, or better, physical immateriality, but it is also inseparable from the material bodies it makes visible. In fact, light is not only 'bound' to material bodies, but light is only *illuminating* insofar as it makes heavy, material bodies manifest. That light is, on the one hand, immaterial, and on the other hand, the reflexion of material bodies from out of themselves into open visibility, is highly significant. For here we learn that nature does not only involve the stirrings of self-determining freedom (i.e., in planetary motion), but a natural analogue of thought. As we will see in Chapter 7, thought is an emergent immateriality that is nothing other than the means by which the *logos* of external being *shows* itself. For this reason, Hegel goes so far as to say that light is 'thought itself, present in natural mode.'[136]

That being said, Hegel is also insistent upon the difference between light and thought. This is why the additions to the philosophy of nature are filled with disparaging remarks about the 'primitive' forms of consciousness that see the divine in the natural phenomenon of light. Light is a superficial and 'abstract appearing' that does not enter the depths of the external world in the way thought does through its own internal determinacy.[137] Thus, light, as *pure* identity-with-self, is terribly abstract in comparison to the concrete determinacy of consciousness. Indeed, with the logical emergence of light, 'the hard One', i.e., the concrete universal, 'has melted and, as a continuity of manifestation lacking all determination, has lost its opposition.'[138] As a result, light 'lacks the *concrete* unity with itself possessed by self-consciousness […] and is consequently only a manifestation of nature, not of spirit.'[139] Whereas thought enters into the depth of external being and thereby exposes its inner, rational core, light only makes manifest the surface of material bodies. Nevertheless, thought would not be possible were it not for the light that makes manifest the manifestness (i.e., nature) of *logos*: 'Light brings us into the universal interrelation; everything exists for us in theoretical, unresistant fashion because it is in light.'[140]

The significance of this stage of nature is not limited, however, to the manner in which light prefigures the emergence of consciousness. We can conclude this chapter with two final points about the phenomenon of light and its significance for this study.

First, his discussion of light gives us a final opportunity in this chapter to highlight the way Hegel seeks to derive nature's forms through a rational method. Hegel is often, and rightly, seen as a follower of Goethe's theory of light and colour, especially insofar as Goethe set an example for a non-Newtonian philosophy of colour and its concrete reality. But it would be a mistake to see Hegel as straightforwardly Goethean in his account of the visible world. We have seen throughout our study of Hegel's mechanics that Hegel is committed to articulating the *rational structure* of nature's stages. In this way, Hegel is far afield from Goethe's proto-phenomenological orientation in the philosophy of nature. Indeed, the latter prefaces his *Farbenlehre* with the claim that colours, as perceptible and concrete, should be given pride of place, as opposed to the related but more abstract phenomenon of light, which has received far more attention in the history of natural philosophy. In Goethe's words, 'it is useless to attempt to express the nature of a thing abstractedly. Effects we can perceive, and a complete history of those effects would, in fact, sufficiently define the nature of the thing itself.'[141] From a Hegelian perspective, Goethe rightly disparages the modern tradition for mathematising nature and thereby evacuating it of concrete determinacy. But the justification for redressing this situation must be strictly philosophical, and it does not matter to *philosophy* that, in ordinary perception, we encounter colours and not light 'as such'.[142] For philosophy begins with the most basic *logical structure* of nature (self-externality) and works its way through the successive *concretisation* of nature through logical explication.[143] The uniqueness of Hegel's perspective—here with regard to light but also throughout his philosophy of nature—is that the concrete, qualitative determinacy of the natural world is ontologically dependent upon more abstract ontological determinations, and that philosophy must rise to the concrete only through a consideration of the abstract forms upon which the concrete is dependent.[144]

The final point I will make regarding the self-formation of matter is connected to this insistence of Hegel's on ignoring the phenomenology of nature in favour of a thoroughgoing rationalism. As we have seen, the becoming-manifest of nature through qualitative determinacy precedes any consideration of the beings to which such manifestness might appear. Hegel rejects the idea that manifestation or givenness requires some recipient.[145] According to Hegel, nature makes itself visible and, indeed, knowable long before there is an organism, let alone a human being, to perceive the natural world. To be sure, Hegel is uninterested in the *historical* precedence of givenness to the beings that perceive nature—and I will return to this point in Chapter 8. But Hegel is committed to the idea that the manifestation of nature is ontologically more fundamental than the beings that perceive the natural world. That nature shows itself—and that

it shows itself as qualitatively distinct—is logically and therefore ontologically prior to all sensation, perception, and thought.

## Notes

1 Throughout this chapter, I emphasise the idea that qualitative determinacy in nature only emerges with the transition to physics, the second part of Hegel's philosophy of nature, following his account of mechanics. To complicate matters, what I am describing as the strictly quantitative determinacy of mechanical nature refers back to the logic of quality presented in the *Science of Logic* and the *Encyclopaedia* Logic. For example, repulsion and attraction are considered in the chapter on quality in the *Science of Logic*, which precedes the chapter on quantity; these logical determinations then reappear in the mechanics as constitutive features of matter's quantitative determinacy. There is consequently an important sense in which the strictly quantitative determinacy in mechanical nature already involves *something* qualitative—although not, on my view, anything concerning *physical* quality. Qualitatively determinate *nature*, i.e., *physical* quality, only emerges with the transition from mechanics to physics. Nature, for Hegel, only expresses its intrinsic qualitative determinacy on the basis of a logic of *mechanism* in which sheer matter-in-motion proves to necessitate a kind of qualitative determinacy that is lacking in the *Logic*, since this novel form of quality is the determinacy of physical nature: the first *real* expression of quality in the system.

2 As Findlay remarks, 'Many scholars have written as if those who first published the *Zusätze* deserve blame, whereas they deserve boundless gratitude' (Findlay, Foreword to the *Philosophy of Nature*, p. vii). Indeed, when the additions do shed light on the highly convoluted logical development of the *Encyclopaedia*—even when these are additions that come from the Jena period—they are invaluable interpretive resources. In the Foreword to the 1830 *Encyclopaedia*, Hegel himself notes that the paragraphs comprise the merely formal, skeletal outline of the system, since the text was written as a compendium to his lectures, the latter of which are necessary to fully appreciate the logical development of the system. *W* 8: 32; *Encyclopaedia Logic*, p. 18. See also *W* 8: § 16, 60; *Encyclopaedia Logic*, p. 39.

3 *W* 9: § 254, 41; *Philosophy of Nature*, p. 28.

4 *W* 9: Addition to § 254, 43; *Philosophy of Nature*, p. 30.

5 *W* 9: § 254, 41; *Philosophy of Nature*, p. 28.

6 Samuel Alexander, 'Hegel's Conception of Nature', *Mind* 11 (1886), p. 506.

7 'Space, as in itself the Notion as such, contains within itself the *differences* of the Notion.' *W* 9: § 255, 44; *Philosophy of Nature*, p. 30.

8 In Hegel's words:

> *Determinateness* as such belongs to being and the qualitative; as the determinateness of the concept, it is *particularity*. It is not a *limit*, as if it were related to an *other* beyond it, but is rather, as just shown, the universal's own

> immanent moment; in particularity, therefore, the universal is not in an other but simply and solely with itself.
>
> (*W* 6: 280; *Science of Logic* [Giovanni], p. 534)

9 Houlgate, *An Introduction to Hegel*, p. 127.
10 *W* 9: § 256, 44; *Philosophy of Nature*, p. 31.
11 The first definition of Euclid's *Elements* states that 'a *point*, is that which has no part.' Allen, John, *Euclid's Elements of Geometry: The First Six Books*. Baltimore: Cushing and Jewett, 1822), Book I, Definition 1, p. 14.
12 Houlgate, *An Introduction to Hegel*, p. 124.
13 'The line consequently passes over into the plane.' *W* 9: § 256, 45; *Philosophy of Nature*, p. 31.
14 *W* 9: § 256, 45; *Philosophy of Nature*, p. 31.
15 Richard Dien Winfield, *Hegel and the Future of Systematic Philosophy* (London: Palgrave Macmillan, 2014), p. 113.
16 Winfield, *Hegel and the Future of Systematic Philosophy*, p. 113.
17 Winfield, *Hegel and the Future of Systematic Philosophy*, p. 113.
18 *W* 9: § 256, 44; *Philosophy of Nature*, p. 31. Emphasis modified.
19 Houlgate, *An Introduction to Hegel*, p. 126.
20 See above, the first note to this chapter.
21 *W* 9: § 255: 44; *Philosophy of Nature*, p. 30.
22 For Hegel's account of 'diversity', see *W* 6: 47–55; *Science of Logic* (Giovanni), pp. 362–367.
23 There are times when Hegel shows an interest in the names we give to things; this is not one of them.
24 *W* 9: Remark to § 255, 44; *Philosophy of Nature*, p. 31.
25 *W* 9: Remark to § 255, 44; *Philosophy of Nature*, p. 31.
26 *W* 9: Addition to § 253, 41; *Philosophy of Nature*, p. 28: 'Self-externality splits at once into two forms, positively as Space, and negatively as Time.'
27 *W* 9: Addition to § 257, 48; *Philosophy of Nature*, p. 34.
28 *W* 9: Addition to § 257, 48; *Philosophy of Nature*, p. 34.
29 *W* 9: Remark to § 258, 49; *Philosophy of Nature*, p. 35. Emphasis modified.
30 *W* 9: § 258, 48; *Philosophy of Nature*, p. 34.
31 *W* 5: 83; *Science of Logic* (Giovanni), pp. 59–60.
32 While it would be misguided to conceive of the philosophy of nature as an *application* of the purely logical categories of the *Logic* to the domain of concrete existence, there is a sense in which logical determinations of the *Logic* become 'concretised' in the *Realphilosophie*. But this results from the fact that being has already proven to involve certain ontological determinations in the *Logic*—namely, the most general or abstract determinations—and it should therefore come as no surprise that such determinations reappear in the concrete philosophies of nature and spirit.
33 *W* 9: Remark to § 258, 49; *Philosophy of Nature*, p. 35.
34 *W* 9: Addition to § 258, 50; *Philosophy of Nature*, pp. 35–36.
35 Findlay, *Hegel: A Re-Examination* (London: Routledge, 2002), p. 274.

36 See the Remark to § 258: 'Time, like space, is a *pure form* of *sense* or *intuition*' (*W* 9: 48; *Philosophy of Nature*, p. 34); and the Remark to § 254: 'Disregarding what belongs in the Kantian conception to subjective idealism and its determinations, there remains the correct definition that space is a mere form, i.e. an *abstraction*, that of immediate *externality*' (*W* 9: 42; *Philosophy of Nature*, pp. 28–29).
37 *KGS* III: 55; *Critique of Pure Reason* (A26)/B42, p. 176.
38 *KGS* III: 55–56; *Critique of Pure Reason* (A27)/B43, p. 177.
39 As Karin de Boer writes, 'Hegel thus seems to let the Kantian opposition between pure concept and pure intuition be preceded by a concept that of itself enacts this difference.' Karin de Boer, *Thinking in the Light of Time: Heidegger's Encounter with Hegel* (Albany: State University of New York, 2000), p. 249. Ng makes the compelling argument that, according to Hegel, the concept (or the Idea) enacts this difference by doubling itself at the end of the *Logic*—as immediate and unconscious life, on the one hand, and then as self-conscious cognition, on the other. According to Ng, this doubling of the Idea as life and cognition replaces the Kantian story about the two sources of knowledge (i.e., sensibility and understanding). See Ng, *Hegel's Concept of Life*, Chapters 7 and 8. As persuasive as much of this argument is, it seems to me that it ultimately makes Hegel out to be far too much of a 'subjective idealist', implying that the forms of space and time—while not necessarily tied to humanity—are tied to some form of organic subjectivity. In large part, Hegel creates this problem for himself, since he very much gets ahead of himself in the passages on life at the end of the *Logic*. I briefly explore this issue in Berger, 'The Logic of Organic Forces', pp. 213–214.
40 See Paul Ziche, 'Raumdimensionen und Prinzipiendeduktion', which develops an account of the difference between Schelling and Hegel regarding the derivation of three-dimensionality while also highlighting the manner in which both philosophers go beyond Kant in pursuing such a derivation.
41 That is, space *is there* in the mode of *praesentia*, an immediacy of being which continues throughout the *three*-dimensionality of space.
42 *W* 9: § 254, 41; *Philosophy of Nature*, p. 28. Emphasis modified.
43 Alan B. Brinkley, 'Time in Hegel's Phenomenology', *Tulane Studies in Philosophy* 9: *Studies in Hegel* (1960), p. 7.
44 *W* 9: Remark to § 258, 49; *Philosophy of Nature*, p. 35.
45 *W* 9: § 259, 51; *Philosophy of Nature*, p. 37.
46 *W* 9: § 259, 51–52; *Philosophy of Nature*, p. 37.
47 *W* 9: § 260, 55; *Philosophy of Nature*, p. 40.
48 *W* 9: § 260, 55; *Philosophy of Nature*, p. 40. There is an echo here of the Idea's free release into nature. In both cases, self-negating negativity collapses into the immediacy of spatial extension.
49 'The Here is at the same time a Now, for it is the point of duration. This unity of Here and Now is Place.' *W* 9: Addition to § 260, 56; *Philosophy of Nature*, p. 40.
50 *W* 9: § 261, 56; *Philosophy of Nature*, p. 41.
51 As Houlgate puts it, 'logically, space and time must constitute *place that negates itself spatially as well as temporally* – place that, while retaining its

identity, ceases to be *this* place and becomes *another* place.' Houlgate, *An Introduction to Hegel*, p. 131.

52 Thomas Posch, 'Hegel and the Sciences', p. 184.

53 Hegel does not make this argument explicitly, and in fact, further on in the mechanics he defines rest as 'the negation of motion in body' (*W* 9: § 264, 64; *Philosophy of Nature*, p. 48). Nevertheless, from the context of § 264, we can see that such a 'negation of motion' is the negation of a distinctive kind of motion, namely, the change of spatial location. Implicit in Hegel's conception of place, however, is the idea that rest is also a form of motion, and the paragraphs on inertia (§§ 263–264) should be read in light of this more fundamental idea.

54 'Since there is motion, something moves; but this something which persists is matter.' *W* 9: Addition to § 261, 60; *Philosophy of Nature*, p. 44.

55 *W* 9: Addition to § 261, 60; *Philosophy of Nature*, p. 44.

56 *W* 9: Addition to § 261, 60; *Philosophy of Nature*, p. 44.

57 *W* 9: Remark to § 261, 56; *Philosophy of Nature*, p. 41.

58 *W* 9: Addition to § 261, 60; *Philosophy of Nature*, p. 44.

59 Cf. Karl Marx, *Capital: A Critique of Political Economy, Volume I*, trans. Ben Fowkes (London: Penguin, 1990), p. 102. The basis of Marx's error is standard in the reception of Hegel: the conflation of logic, or the Idea, with spirit.

60 *W* 9: § 262, 60; *Philosophy of Nature*, p. 44.

61 *W* 9: § 262, 60; *Philosophy of Nature*, p. 44.

62 *W* 5: 204; *Science of Logic* (Miller), p. 182.

63 For Hegel's most detailed account of repulsion and attraction, see *W* 5: 190–208; *Science of Logic* (Miller), pp. 170–184.

64 See the Remark to § 262, in which Hegel describes '*heavy* matter' as possessing 'the ideal moments of the Notion, of singularity or subjectivity'. Hegel goes on: 'Gravity … is the reduction of both discrete and continuous particularity to unity as a negative relation to self, to *singularity*, to a *subjectivity* which, however, is still quite abstract.' *W* 9: 61; *Philosophy of Nature*, p. 45.

65 *W* 9: § 262, 60–61; *Philosophy of Nature*, p. 44.

66 *W* 9: § 266, 69; *Philosophy of Nature*, p. 52. I believe we can better understand Hegel's conception of gravity if we take him to be alluding here to two distinct features of free fall pertaining to two senses of the term 'essential'. On the one hand, falling is essential to what it means to be a material body; it is the *truth* of mechanical motion. But *as falling*, the truth or being of mechanical motion proves to be 'essential' (*wesentlich*) in Hegel's technical, logical sense of the term: something is *posited* in this activity, and yet that which is posited is related to but somehow different from that which does the positing. In this case, subjectivity is posited through matter's striving-for-subjectivity, but since this is only ever a striving for subjectivity, the striving remains separate from the subjectivity it posits as its end. We have not yet arrived at a natural manifestation of *self-developmental* movement or the motion of the 'concept' as the explicitly free movement of self-determination, in which *what is* is its own end. The proper systematic place in which this distinction is made, i.e., between 'essential' and properly 'conceptual' movement, is the *Logic*, 'essence' and 'concept' comprising the content of the second and third parts of that domain

of philosophy. But the determinations of logic reappear at significant points in the philosophy of nature. I therefore take it that Hegel's description of free fall as 'the essential motion' of finite mechanics is meant to drive home the point that, at this stage of nature's logical development, the concept (or Idea) is alienated from its self-development and consequently expresses itself as less-than-conceptual in its motion ('conceptual' here, again, in the technical sense meaning 'self-determination' or 'self-realisation'). To be sure, nature explicitly *strives* for conceptual unity in the act of free fall, but this unity is forever beyond the finite body and is thus a selfhood that nature—the Idea in its self-externality—has yet to achieve in concrete form.

67 *W* 9: Addition to § 261, 60; *Philosophy of Nature*, p. 44.
68 *W* 9: § 263, 64; *Philosophy of Nature*, p. 47.
69 *W* 9: § 263, 64; *Philosophy of Nature*, p. 47.
70 *W* 9: § 265, 66; *Philosophy of Nature*, p. 49.
71 *W* 9: Remark to § 269, 83; *Philosophy of Nature*, p. 63.
72 *W* 9: Remark to § 262, 61; *Philosophy of Nature*, p. 45.
73 *W* 9: Addition to §262, 63; *Philosophy of Nature*, p. 46.
74 *W* 9: § 267, 75; *Philosophy of Nature*, p. 56. Emphasis modified.
75 *W* 9: Remark to § 270, 93; *Philosophy of Nature*, p. 71.
76 *W* 9: § 267, 75; *Philosophy of Nature*, p. 56. Cf. Houlgate, *An Introduction to Hegel*, p. 138.
77 *W* 9: Remark to § 262, 62; *Philosophy of Nature*, p. 46.
78 On this point, it is worth noting how close Hegel is to Schelling. Both philosophers defend the Boehmean notion that nature longs to be other than it is, and it is striking that Hegel retains the emotive language of Boehme as much as Schelling does when describing what they both see as a fully rational process in nature. For example, Hegel remarks: 'The unity of gravity is only an Ought, a longing (*Sehnsucht*), the most unhappy *nisus* to which matter is eternally condemned.' *W* 9: Addition to § 262, 63; *Philosophy of Nature*, p. 46.
79 See Chapter 4, note 2 above and the final section of Chapter 7 below.
80 *W* 9: Addition to § 265, 68; *Philosophy of Nature*, p. 51. For Hegel's account of inertia, see §§ 263–264; for his account of thrust, see §§ 265–266.
81 In addition to claiming that a body is intrinsically heavy and therefore freely falls towards a centre beyond it, Hegel aims to show how this heaviness of matter follows a more specific logical pattern, one that has yet to be explained philosophically but has been discovered empirically by Galileo and subsequently explained mathematically by Newton. Hegel's explanation of Galileo's law of fall is found in the Remark to § 267. For an account of Hegel's logical derivation of Galileo's law of fall, see Houlgate, *An Introduction to Hegel*, pp. 138–144.
82 *W* 5: 200; *Science of Logic* (Giovanni), p. 146.
83 *W* 5: 200; *Science of Logic* (Giovanni), p. 145.
84 *KGS* IV: 508–509, *Metaphysical Foundations*, pp. 56–57.
85 *W* 5: 203; *Science of Logic* (Giovanni), p. 148.
86 *W* 5: 204; *Science of Logic* (Giovanni), p. 148.
87 Hegel was impressed with Baader throughout his life, seemingly more so than Baader was with Hegel. See Magee, 'Hegel and Mysticism', p. 262.

88 See *SW* I/4: 267–280; *Bruno*, pp. 167–178 and *SW* I/4: 431–450. See also *SW* I/2: 187–190; *Ideas*, pp. 150–152.
89 *W* 9: Remark to § 269, 82; *Philosophy of Nature*, p. 63.
90 For Hegel's first critique of Newton's mathematisation of Kepler's laws, see his 1801 dissertation *De Orbitis Planetarum*, translated into English by Pierre Adler in *Miscellaneous Writings of G.W.F. Hegel*, pp. 163–206.
91 Indeed, for Hegel, 'everything turns on the proof that the path [of the planet] is an ellipse.' *W* 9: Addition to § 270, 99; *Philosophy of Nature*, p. 76.
92 In what follows, I attempt to simplify what is an extraordinarily complicated argument in the Remark to § 270. For a thorough account of this argument, and one that differs from mine in important respects, see Houlgate, *An Introduction to Hegel*, pp. 147–153.
93 *W* 9: Remark to § 270, 91–92; *Philosophy of Nature*, p. 70.
94 *W* 9: Remark to § 270, 91–92; *Philosophy of Nature*, p. 70.
95 *W* 9: Remark to § 270, 92; *Philosophy of Nature*, p. 70.
96 *W* 9: Remark to § 270, 92; *Philosophy of Nature*, p. 71.
97 *W* 9: Remark to § 270, 93; *Philosophy of Nature*, p. 71.
98 *W* 9: Remark to § 270, 93; *Philosophy of Nature*, p. 71.
99 *W* 9: Remark to § 270, 85–86; *Philosophy of Nature*, p. 65.
100 *W* 9: Addition to § 275, 111; *Philosophy of Nature*, p. 87.
101 According to Hegel, 'nature in the determinate existence which makes it Nature, is not to be deified; nor are sun, moon, animals, plants, etc., to be regarded and cited as more excellent, as works of God, than human actions and events.' *W* 9: Remark to § 248, 27; *Philosophy of Nature*, p. 17. See also the Addition to § 248, 31; *Philosophy of Nature*, p. 19.
102 Heinrich Heine, *Geständnisse* (1854) quoting Hegel, cited in Walter Kaufmann, *Hegel: A Reinterpretation* (New York: Anchor Books, 1996), p. 367. See also the Addition to § 268:

> The stars can be admired on account of their repose, but they are not to be reckoned as equal in dignity to the concrete individual bodies. Matter, in filling space, erupts into an infinite plurality of masses, but this, which may delight the eye, is only the first manifestation of matter. This eruption of light is as little worthy of wonderment as an eruption of the skin or a swarm of flies.
>
> (W 9: 81; *Philosophy of Nature*, p. 62)

103 *W* 9: Addition to § 269, 85; *Philosophy of Nature*, p. 65. See also Schelling's similar comment in the *Bruno*: 'In short, [the heavenly bodies] are blessed animals and, compared to mortal men, undying gods.' *SW* I/4: 262; *Bruno*, p. 162. In the Addition to § 270, Hegel denounces sun-worship as misguided precisely because the planets are more concrete expressions of rational freedom than are the abstract stars, the latter of which simply remain what they are without going out of themselves (and subsequently returning to themselves). In this same passage, Hegel claims that it is because of this concrete perfection exhibited by the planets that organic life can emerge on planets—and only on planets. *W* 9: 104; *Philosophy of Nature*, p. 81.
104 *W* 9: Addition to § 269, 85; *Philosophy of Nature*, p. 65.

105 *W* 18: 370; *Lectures on the History of Philosophy: Volume I*, p. 370.
106 'If the contingency of Spirit, the free will does evil, this is still infinitely superior to the regular motions of the celestial bodies, or to the innocence of plant life; for what thus errs is still Spirit.' *W* 9: Remark to § 248, 29; *Philosophy of Nature*, p. 18.
107 *W* 9: § 269, 82; *Philosophy of Nature*, p. 62.
108 *W* 9: § 269, 82; *Philosophy of Nature*, p. 62. Emphasis and translation modified.
109 *W* 9: Remark to § 269, 83; *Philosophy of Nature*, p. 63.
110 *W* 9: Addition to § 276, 120; *Philosophy of Nature*, p. 94.
111 We are now in a position to see a paradox within the logic of free fall that prevents terrestrial bodies from becoming planets in their own right. On the one hand, subjectivity was always *beyond* the falling body, and as a result, matter remained *separate* from itself, lacking true unity. Matter remained, in other words, self-external being. On the other hand, terrestrial bodies only ever sought *one* centre. The implicit 'dream' of subjectivity, from the 'perspective' of rectilinear motion, is of a 'one' *that is not many*, a one pure and simple. Intrinsically at odds with its own aim of achieving unity-in-*difference*, the falling body implicitly longs for such a one uncorrupted by difference. Now, with the formation of a solar *system*, matter forms itself by creating empty spaces and physically distinct material bodies that are related to one another as different parts of a more general system. It is only in this way that subjectivity can be achieved, according to Hegel; self-external being realises subjective, self-determining motion only by passing through genuine *difference*.
112 *W* 9: § 271, 107; *Philosophy of Nature*, p. 83.
113 *W* 9: § 271, 107; *Philosophy of Nature*, p. 83.
114 *W* 5: 440; *Science of Logic* (Miller), pp. 369–370.
115 *W* 9: Addition to § 271, 108; *Philosophy of Nature*, p. 84.
116 Again, see Schelling:

> Now the more the finite dimension of a being possesses the nature of the infinite, the more it takes on the imperishable character of the totality, the more it appears to be stable, enduring, and intrinsically perfect, and the less it seems to need anything outside of itself. The stars and the heavenly bodies are finite beings of this sort; their ideas are the most perfect of all those that are in God, since they best express this subsistence of the finite in and with the infinite in God.
>
> (*SW* I/4: 261–262; *Bruno*, pp. 161–162)

117 *W* 9: § 267, 75; *Philosophy of Nature*, p. 56.
118 *W* 9: Addition to § 270, 104; *Philosophy of Nature*, p. 80.
119 *W* 9: Addition to § 274, 111; *Philosophy of Nature*, p. 86.
120 It is worth quoting this passage in full:

> The form is in this way materialised. Regarded from the opposite point of view matter, in this negation of its self-externality in the totality, has now acquired within itself what it previously only sought, namely, the centre, its self, determinateness of form. Its abstract, torpid being-within-self, as

> simply heavy, has resolved itself into form: it is *qualified matter*—the sphere of *Physics*.
>
> (*W* 9: § 271, 106–107; *Philosophy of Nature*, p. 83)

121 *W* 9: Remark to § 249, 31; *Philosophy of Nature*, p. 20. See also § 249 itself and the Addition.
122 *W* 9: Addition to § 271, 107; *Philosophy of Nature*, p. 83.
123 According to Hegel:

> The planetary bodies are, as the directly concrete ones, the most perfect in their existence. Usually, the sun is given pride of place, inasmuch as the Understanding prefers the abstract to the concrete, the fixed stars, for example, even being more esteemed than the bodies of the solar system.
>
> (*W* 9: Remark to § 270, 85–86; *Philosophy of Nature*, p. 65)

On the distinction between concrete, individuated light (the sun and stars) and light *as such*, see the Addition to § 272, 109; *Philosophy of Nature*, p. 85.
124 Others have pointed to a further significance in Hegel's discussion of light: its relation to Einstein's theory of relativity. See Findlay, *Hegel: A Re-examination*, p. 279 and Wandschneider, 'The Philosophy of Nature of Kant, Schelling and Hegel', p. 91.
125 *W* 9: § 275, 111; *Philosophy of Nature*, p. 87.
126 *W* 9: Remark to § 276, 117; *Philosophy of Nature*, p. 91.
127 *W* 9: Addition to § 276, 119; *Philosophy of Nature*, p. 93.
128 *W* 9: Addition to § 275, 112; *Philosophy of Nature*, p. 88.
129 *W* 9: Remark to § 276, 117; *Philosophy of Nature*, p. 92. See also the Addition to the same paragraph:

> The physics of light as particles is no whit better than the efforts of a man who, having built a house without windows, wants to carry light into it in bags. The expression 'bundles of rays' is merely one of convenience, it means nothing; the bundles are light in its entirety, which is only outwardly limited; it is no more divided into bundles of rays than is the Ego or pure self-consciousness. It is the same when I say: in my time, or in Caesar's time. This was also the time of everyone else; but here I am speaking of it in relation to Caesar, and restrict it to him without meaning that he really had a separate ray or parcel of time. The Newtonian theory according to which light is propagated in straight lines, or the wave theory which makes it travel in waves, are, like Euler's aether or the vibration of sound, materialistic representations quite useless for the comprehension of light.
>
> (*W* 9: Addition to § 276, 119–120; *Philosophy of Nature*, pp. 93–94)

130 *W* 9: Addition to § 276, 119; *Philosophy of Nature*, p. 93.
131 *W* 9: Remark to § 276, 118; *Philosophy of Nature*, p. 93.
132 *W* 9: Remark to § 276, 118; *Philosophy of Nature*, p. 92.
133 *W* 9: Addition to § 276, 119; *Philosophy of Nature*, p. 93.
134 *W* 9: § 276, 116; *Philosophy of Nature*, p. 91.
135 *W* 9: Addition to § 276, 119; *Philosophy of Nature*, p. 93.

136 *W* 9: Addition to § 276, 119; *Philosophy of Nature*, p. 93.
137 *W* 9: Addition to § 275, 113; *Philosophy of Nature*, p. 88.
138 *W* 9: Addition to § 275, 112; *Philosophy of Nature*, p. 88.
139 *W* 9: Addition to § 275, 113; *Philosophy of Nature*, p. 88. Emphasis modified.
140 *W* 9: Addition to § 275, 112; *Philosophy of Nature*, p. 88.
141 Goethe, *Theory of Colours*, trans. Charles L. Eastlake (Cambridge, MA: MIT Press, 1970) p. xxxvii.
142 According to Hegel, the abstract thinking of which Newtonian science is guilty is not the abstraction from the empirical or the experiential, but rather the abstraction from the concrete, determine, content-rich *logos* of being and the turn to a mathematical formalism that strips reality of its immanent intelligibility. For this reason, Hegel's critique of Newtonian abstraction should not be seen as entirely of a piece with Goethe's more empirical philosophy of nature—despite the fact that Hegel defends Goethe's theory of colour and reunited with Goethe in large part thanks to Goethe's optics (see Pinkard, *Hegel: A Biography*, p. 376). From the perspective of Hegel's system, the justification for a non-Newtonian theory of colour cannot be experience; what is need is a strictly rational derivation of the relationship between light, darkness, and colour.
143 Hegel expresses his frustration with Goethe's empiricism in a letter to Schelling written in February of 1807:

> Out of hatred for the thought by which others have corrupted the question, [Goethe] adheres completely to the empirical, instead of going beyond that thought to the other side of the empirical, to the concept which will perhaps only get to shimmer through.

Letter from Hegel to Schelling, 23 February 1807 in *Briefe*, p. 151; *Hegel: The Letters*, p. 77.
144 For a different perspective on the relationship between Goethe and Hegel on these issues, see Luca Illetterati, 'Hegel's Exposition of Goethe's Theory of Colour' in *Hegel and Newtonianism*, pp. 557–568.
145 In this respect, Quientin Meillassoux's critique of absolute idealism misses the mark. Near the beginning of *After Finitude*, Meillassoux presents a list of axioms which, he argues, must necessarily appear to the post-critical philosopher as 'a tissue of absurdities' (Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier [New York: Continuum International Publishing Group, 2009], p. 14). The first of these axioms—'that *being* is not co-extensive with *manifestation*, since events have occurred in the past which were not manifest to anyone'—reveals Meillassoux's refusal to conceive of manifestation (or givenness) without a recipient. All of the axioms that follow presuppose this identity of manifestation *for subjectivity* and manifestation *as such*. For the absolute idealist, there is no problem conceiving of being as appearance without in this way presupposing the existence of a subject to whom being appears.

# 7 Life and the Liberation of Spirit

Chapter 6 concluded with a discussion of Hegel's conception of light, which, in certain ways, points ahead to the emergence of thought. Since beings that think are also alive, light also implicitly points ahead to the organic world from within strictly inorganic nature. Yet light is by no means the last stage of Hegel's philosophy of inorganic nature. The 'physics'—the second and longest part of Hegel's philosophy of nature—is filled with detailed discussions of natural phenomena and their logical derivation. On Hegel's account, nature proves to not only involve general phenomenality or 'manifestness' in the form of light, but a plethora of other natural forms with distinctive logical determinations: darkness, air, fire, water, earth, shape, magnetism, specific gravity, cohesion, sound, heat, polarity, crystallisation, force, colour, odour, taste, electricity, and chemical processes. Because light is the *manifestation* of matter, something *other* than it must *be* so that physical qualities can be made apparent: 'In order, therefore, that something finally can appear, can be made visible, some further particularization must be physically present (e.g., roughness, colour).'[1] Since my focus in this study is the nature-spirit relation, I will now turn my attention to the final stages of nature's immanent development, Hegel's organics, which culminates in the emergence of spirit. I will not, therefore, consider the dialectic of Hegel's physics in any detail. It is, however, important to simply note that, throughout the physics, Hegel elaborates on the idea, explored already in the logic of light, that nature determines itself as qualitatively distinct, and, moreover, as *particular* on account of this distinctness. According to Hegel, nature makes itself manifest in qualitatively distinct ways by necessity. Natural beings are not only visible, but sonorous, tactile, odorous, etc. This does not yet imply the existence of any beings, natural or otherwise, that can see, hear, or touch the particular qualities in nature. The sensuousness of nature does not require that there be sentience. More fundamental to the structure of nature is the simple fact that nature makes itself manifest and qualitatively distinct,

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that it particularises itself in the sensuous qualities which may *or may not* be sensed (since, at this stage, there may or may not turn out to *be* creatures with capacities to sense such qualities). To be sure, the way a specific region of space-time expresses its qualitative particularity is entirely contingent for Hegel. This is why Hegel finds Krug's challenge to Schelling's system so absurd: of course philosophy cannot deduce the existence of Krug's pen or any other particular entity, and it should never aim to do so.[2] What philosophy can and must illuminate, however, is the rational necessity by which nature determines itself *generally* as visible, sonorous, tactile, etc. Philosophy must derive particularity *in general*, but this has nothing to do with deriving the necessary existence of particular individuals.

### Chemical Processes and 'The Chemical Process'

In the final stages of the physics, we learn that material nature is qualitatively distinct in such a manner as to be intrinsically related to *other* qualitatively distinct matter. A material body's being intrinsically related to that which is other than it is made increasingly more explicit, from the merely spatial relationship expressed in magnetism (§§ 312–314) to the more complicated relationship expressed in electricity (§§ 323–325), until finally this way of being related to other bodies reaches its fullest expression in the chemical process (§§ 326–336). Taken as a single phenomenon, the 'chemical process' is simply the implicit unity of all chemical *processes*. It therefore refers to processes of chemical combination (*Vereinung*)—including galvanism, combustion, and neutralisation—as well as chemical separation (*Scheidung*), or what Hegel describes as the 'positing of the differentiated as identical' (combination) and the 'differentiation of the identical' (separation).[3] These chemical processes exhibit the relational character of qualitative particularity, because in such processes certain elements prove to interact in specific ways (associative or dissociative) with *other* elements, thanks precisely to their intrinsic nature as oxides, alkalis, acids, salts, etc.

In both chemical combination and separation, a material body undergoes radical transformation in such a manner as to negate the qualitative determinacy that had previously obtained. According to Hegel, this means that particular, qualitative features of the natural world are *destroyed* in the chemical process: 'In the chemical process, bodies alter not merely superficially but on all sides: every property is effaced, cohesion, colour, lustre, opacity, resonance, transparency.'[4] It is necessary, according to Hegel, that we not interpret this process along essentialist lines by positing the existence of immutable chemical substances which, although they *appear* to have shed their qualitative specificity, remain essentially the

same.[5] In the chemical process, a body undergoes such radical transformation that it is no longer the body that it was previously. In other words, the natural being which, up until now, remained a distinctive, particular being loses itself in the chemical process; the particular is destroyed and thereby proves its essential finitude. 'It is precisely in the chemical process that … body reveals the transiency of its existence.'[6]

We can further unpack this finitude of substance if we consider the physical (as opposed to logical) origin of qualitative determinacy. According to Hegel, qualitatively determinate particulars are themselves products of the same chemical process which destroys them. Here again, the chemical process is not simply generative of the qualitative specificity *of* a chemical substance—as if qualities were properties inhering in selfsame 'things'—but is generative of the qualitatively distinct chemical substance itself.[7] It is possible to interpret this as just one of many instances in which Hegel demonstrates his preference for process ontology over and above an early modern European form of substance ontology. But for the sake of this study, there is something far more important going on here. For it is within this logic of the *generation* of chemical substances that Hegel understands nature's finitude to bear the seeds of infinite being or *life*.

While chemical processes of combination and separation destroy qualitatively determinate substances, these processes also leave something new in their place. Such newly generated substances can subsequently, thanks to their intrinsic, qualitatively determinate character, combine with other substances or be separated by other substances, resulting in further destruction and generation, and so on *ad infinitum*. For Hegel, this indicates that despite the finitude of any given chemical process, there is an implicit *total* chemical process at work throughout the various processes of chemical combination and separation. Although the distinctness of particular natural qualities is necessarily destroyed, further chemical processes are made possible through this act of destruction. If such chemical processes were not separate from one another, but were rather moments of a continuous process of self-transformation, then the 'total chemical process' could be understood as sustaining itself through the destruction of its various, particular instances. And it is in this notion of the continuation of a process through destruction that we first glimpse the possibility of concrete *life* in the logic of nature. When we take the structure of chemical processes to its logical conclusion, we see that *implicit* in these processes is a total chemical process, something that (again, implicitly) has a distinctive character. According to Hegel, if the chemical process could explicitly sustain itself throughout its transformations—if some *self* were to carry on existing throughout these changes—it would cease to be mere chemical process; such an infinite process would be an

organic form of existence, i.e., a form of existence which perpetuates itself through difference.[8]

Here is another way Hegel makes the same point: 'If the products of [any particular] chemical process *spontaneously renewed their activity*, they would be Life.'[9] We should note that, with this idea of spontaneous renewal, what Hegel has in mind here involves far more self-determination than anything we have seen in nature thus far, including the self-determining motion of the planets.[10] For in this 'living process', the self does not only determine itself freely with respect to its *place*, but 'spontaneously *kindles* and *sustains* itself', i.e., its qualitative character as the self it *is*.[11]

Because 'life is present implicitly in the chemical process', organic self-determination proves to be a logically *necessary* stage of nature.[12] That is, there must be some form of reality that realises the logic of life implicit within the logic of the chemical process. For Hegel, then, the fact that there are living things in the universe is not accidental; life is a logically necessary feature of reality. Thus, in the third and final section of Hegel's philosophy of nature, he considers the necessary ontological structure of life as an 'existent unity',[13] i.e., as an *explicitly* self-determining, self-generating, and self-sustaining process.

## The Earth: Ground of Life

With the emergence of life, Hegel moves on to the third and final part of his philosophy of nature, the 'organics'. The section on organics is itself divided into three stages: the geological organism, the vegetal organism, and the animal organism. In each of these stages, the logic of the organism gradually becomes more and more concrete, until the processual life implicit in the chemical process finally becomes fully explicit in the individuality of the animal.

The first stage of the logic of the organism does not consider life as an actually existing organism, but as the concrete manifestation of the abstract *idea* of organic life. In Hegel's words, 'the first organism, just because it is at first determined as immediate organism or as only *implicitly* organism, does not exist as a *living creature* [*Lebendiges*].'[14] Such an abstract 'life' that is not properly life and is certainly not a 'living creature' is, according to Hegel, the earth upon which actual living creatures exist. Thus, 'geological nature', according to Hegel, 'is only the ground, the basis (*Boden*) of life.'[15]

We have already seen one sense in which the earth may be intimately connected to organic life. In Chapter 6, Earth, along with the other planets of the solar system, were shown to express a form of freedom more absolute than any other celestial body on account of their self-determining motion.[16] Throughout the philosophy of nature, Hegel remarks that only

'primitive' forms of consciousness find the sun and stars expressive of 'the absolute', and that the planets are exceedingly more concrete and, indeed, proto-organic than are the stars in their tiring sublimity. In an addition to the celestial mechanics we find the remark that the sun remains too abstract a body to be populated by organisms, and that 'it is only on the planet that life can appear.'[17] Earth, according to Hegel, is 'superior [*höher*] to the stars and the sun'[18] on account of its self-determining motion, and it is by virtue of such motion—a nascent form of freedom—that the planet becomes a potential basis for life.

But even if the earth acts as the ground upon which life flourishes, it isn't immediately clear why Hegel would place his consideration of the earth within the 'organics'. After all, organic life also requires chemical processes for its emergence, but the logic of chemistry is found in the 'physics' which precedes 'organics'. Why, then, does Hegel think that the geological *ground* of life should be treated within the 'organics'?

In Chapter 5, I argued against the view that Hegel is an organicist in any strong sense. Nature is not a 'giant organism' for Hegel, but a hierarchically structured system of stages culminating in an ontologically distinct set of organic forms. On my view, Hegel's anti-organicism holds here as well, hence his rejection of the idea that the earth is a 'living organism'. Yet Hegel does include his logic of the earth within his speculative biology, and this means that the earth is not only intimately connected to life but is itself, in some sense, organic. According to Hegel, geological nature is structurally distinct from every stage of nature which precedes it, and this is because the earth is a *self-organising body*. Note that the earth is not simply a self-organising system, as one might interpret nature *as a whole*. Whereas nature as a whole can be said to be 'organic' only in the most minimal sense, namely, as a unity of rationally connected parts, the earth is more appropriately understood as an organic form, because it determines itself as a *body* that sustains itself as the individual body it is *through* qualitative transformation.

This is also why the earth, although not a proper organism, is ontologically distinct from inorganic, chemical processes, and therefore merits a place within the 'organics'. For unlike the chemical process, in which bodies prove their transience, the geological process consists of a body that retains its identity through its development. Hegel's distinction between the chemical and geological process turns on the idea that chemical processes are only implicitly connected to one another (to the extent that one chemical process makes further chemical processes possible), but that geological processes are directly and explicitly related to other geological processes, such that we might speak of one single process of the planet's hydrological, meteorological, geological development. The Earth, therefore, is not only a 'self' in its free orbit around the sun, but a self

that determines its qualitative distinctness and *retains* its selfhood through its own activity of qualitative differentiation. Such sustenance of selfhood through difference is, we recall from Chapter 6, an essential feature of subjectivity for Hegel. And this is why he can hold that the absolute Idea, i.e., freely self-determining reason, is no longer self-estranged once the gradation of nature's stages has reached the life-process of the earth.

Another way Hegel describes the difference between the chemical and the organic is that the chemical process, unlike the organic, does not have its end within itself. The generation of new substances isn't something towards which a material substance aims. This is apparent in that the chemical body does not retain itself *through* its transformations. There is consequently no sense in which we could say that the chemical body purposively seeks its own destruction and subsequent development into something new. Life, on the other hand, 'has its other within itself, is in its own self a single rounded totality—or it is its *own end* (*Selbstzweck*).'[19] With the transition from physics to organics, therefore, we require a new form of nature-philosophical explanation: teleology.[20]

According to Hegel, the most basic or primitive way a body can have its end in itself is insofar as a body's transformation of shape is directed towards an end immanent to that body.[21] And this is why Hegel begins the organics with a consideration of the 'geological organism'. The earth *is what it is* only through its immanent development, a development that results in a material body defined by a determinate arrangement of landmasses and bodies of water and a determinate set of atmospheric conditions. The earth, therefore, is both its shape and the processes that *give* it its shape.

> We must not, therefore, explain the origin of inexhaustible springs by mechanically and quite superficially attributing them to percolation; any more than we must use a similar kind of explanation, on the other side, to account for volcanoes and hot springs. On the contrary, just as springs are the lungs and secretory glands for the earth's process of evaporation, so are volcanoes the earth's liver, in that they represent the earth's spontaneous generation of heat within itself.[22]

The shape of the earth is *purposively* developed through the geological process itself. In this way, the earth is 'organic' and its philosophical treatment belongs in the third part of the philosophy of nature.

And yet, as we have seen, Hegel insists that the geological organism is *not* a living creature. For this reason, we should read the Addition to § 341 quoted above as an analogical description, one which is meant to draw our attention to the similarity between the earth's self-organisation and an animal's self-organisation. But this is merely an analogical relationship,

and it does not therefore get to the heart of what geological nature is.[23] The geological organism is 'only implicitly (*an sich*) alive, not in present existence.'[24]

Why, then, would it be a category error to conceive of the 'geological organism' as a 'living creature'? Why, in other words, *doesn't* the earth achieve genuine, organic subjectivity? The geological process determines its shape through hydrological, meteorological, and geological events, and because the earth only becomes what it is *through* this development, the earth exhibits some kind of 'organic selfhood'. Volcanic activity is a purposive, spontaneous generation of heat, and this activity plays an indispensable role in the self-perpetuation of the earth as earth. Implicit in the geological process, however, are ends that are quite distinct from the earth's morphology. In particular, the geological process makes possible the sustenance of plant and animal life. The *telos* of the earth, therefore, is not reducible to its shape, but involves the propagation of non-geological bodies, in particular, more explicitly *organic* bodies, which can only thrive *within* the qualitatively distinct places carved out by the self-determining activity of the earth. The purposive activity of the geological process, in other words, is implicitly directed towards developing habitats within which living organisms can exist and reproduce. That this purpose, although connected to Earth's shape, is also distinct from it, signals the ontologically limited nature of the planet. The earth doesn't properly assimilate difference, 'it does not *bring back* its different members into unity,'[25] because the organisms that exist upon it 'subsist formally on their own', making the earth a 'skeleton'[26] or mere 'crystal of life'.[27] And yet this skeleton is 'fertile—fertile simply as the ground and basis (*Boden*) of the individual vitality upon it'.[28] By engendering the conditions for organic life to flourish, the earth makes *actual* life possible.

## The Plant: The Emergence of Life as Such

As a self-organising system productive of habitable places, the earth makes life possible, but it is not itself a 'vivified organism'.[29] Vegetal life, however, is precisely this; life is *actual* in the plant. Yet plants, it turns out, aren't very good at being the infinite life that they are. As Hegel puts it, although plant life constitutes 'the beginning of subjective vitality', this beginning of actual life is in fact 'external to itself'.[30]

This way of describing the ontological character of plants is perhaps misleading. For plant life is not 'external to itself' in the way that space and the abstract forms of nature are self-external. On the contrary, vegetal life is one of the most concrete forms of nature precisely because it achieves a form of subjectivity that had only been hinted at in Hegel's mechanics. In what sense, then, is plant life 'external to itself'? According to Hegel,

the plant is a 'self' which has not *returned* to itself, a self that does not *relate* to itself *as* a self. Consequently, the plant can neither move itself from its place nor can it experience the world through sensation.[31] Indeed, both locomotion and sensation are lacking in vegetal life on account of the abstract nature of the plant's selfhood. However, since the plant is indeed an *actual*, living self, it must, in some sense, 'find' itself through an activity of differentiation. For the plant is a form of *life*, and, as such, it necessarily *becomes itself* through a process of self-relation. In what sense, then, is the plant both 'external' to itself and a subjective relation to itself? The key to understanding the particular logic of plant life is in its unique form of self-relation. The 'self' to which the plant relates is not so much its *own* objectified self, as is the case in the self-movement and feeling of the animal, but a 'self' *outside* it.[32] And it is in this sense that Hegel understands the life of the plant to be actual and yet 'external to itself'.

But what is this 'self' outside the plant? It is not another individual of the same genus with which the plant might enter into a sexual relationship and thereby achieve selfhood via a primitive form of intersubjectivity (again, as is the case in animal life). Rather, the plant 'becomes itself' or 'finds itself' through its relation to amorphous, elemental nature: in water, air, and, most importantly, light.[33] Insofar as the plant can be understood to *move* itself, then, it does not change its *place* but simply grows *towards* light, the self that lies beyond it:

> Potato-plants sprouting in a cellar creep from distances of several yards across the floor to the side where light enters through a hole in the wall and they climb up the wall as if they knew the way, in order to reach the opening where they can enjoy the light. Sunflowers and a host of other flowers follow the motion of the sun in the sky and turn towards it.[34]

The plant is therefore a living creature because it seeks what is *different* from it, assimilates this difference, and, in so doing, transforms this difference for its own, immanent end, namely, to sustain its activity and perpetuate its species.[35] But rather than assimilating what is 'other' and resting within itself, the plant is an endless growing or 'coming out of itself' (*Außersichkommen*) in search of *more* light, the source of its selfhood.[36] The individuality of the plant, then, is not characterised by an inner freedom to determine itself, but a freedom to seek its inwardness *elsewhere*.

There are logical echoes here of the logic of free fall discussed in Chapter 6, in which a material body posits its 'self' beyond it and in so doing merely *strives* for subjectivity. In both cases, fully realised subjectivity, i.e., becoming at home with oneself through difference, remains beyond reach. However, the plant's distinctive relationship to *light* leads the plant

to express this striving for subjectivity in a unique manner, namely, as a 'progress to infinity': because the plant is utterly dependent upon a feature of nature that is *itself* expressive of a logic of 'bad infinity', the plant is perpetually *on its way to* the infinite, growing without intrinsic, determinate end, progressing *ad infinitum* until it is without further resources to sustain its vital processes.[37] Plants are therefore, much like the light upon which they depend, natural manifestations of the category of 'bad infinity' in the *Logic*.

As we will see, this process of endless striving distinguishes the logic of the plant from that of the animal. Of course, Hegel does not understand the animal to be utterly independent of its elemental environment, for this would simply be another form of bad infinity, a life *set apart* from inorganic nature. But unlike the plant, the animal utilises its environment in order to *maintain* its character, turn inward to its *own experience*, and thereby relate to itself as ontologically distinct from its environment. By contrast, the plant 'lacks the inwardness which would be free from the relationship to the outer world'.[38] The plant thus takes in air, water, and light in order to grow outwards for the sake of further assimilation, which, in turn, allows for further growth, and so on ad infinitum. It is as if the plant 'refuses' to distinguish itself from its environment—for example, in its inability to interrupt its nutritive process[39]—a 'refusal' that logically necessitates that the plant have an impoverished relationship to both its environment and itself. The truly infinite life, for Hegel, will distinguish itself from its world in order to relate *to* that world and to *itself* as ontologically distinct. But such infinite life is only achieved by organisms that turn *into* themselves, proving that the infinite does not lie above and beyond, but within the inner activity and self-feeling of life itself.

That Hegel sees vegetal life as not 'truly infinite' should not, however, indicate that this form of life is insignificant on Hegel's view. On the contrary, just as the true infinite emerges from the bad infinite in the *Science of Logic*, so too is the truly infinite life of the animal logically dependent upon the rational structure of the spuriously infinite vegetal organism. In order to fully grasp this, however, we need to consider the manner in which the plant's very activity of *Außersichkommen* or *Außersichgehen* demonstrates its distinctive vitality. For the plant's activity of 'going forth from itself' sets this form of nature apart as a unique kind of organism that subsequently leads to a higher form of organic life.

Let us therefore consider more closely how Hegel understands the plant's self-determining activity:

> The return-into-self which assimilation terminates, does not have for result the *self* as inner, subjective universality over against externality, does not result in self-feeling. Rather is the plant drawn out of itself by

> light, by its self which is external to it, and climbs towards it, *ramifying into a plurality of individuals*.[40]

While the plant's *Ausßersichgehen* never culminates in a total plant-light union, this process nevertheless allows the plant to achieve a unique form of selfhood, namely, in its 'ramifying into a plurality of individuals'. The infinite growth of the plant, therefore, is nothing other than the *multiplication of its parts*, and these parts are understood as 'individuals' in their own right. As Hegel remarks, 'Any part of the plant can exist immediately as a complete individual.'[41] Hegel's idea, taken over from Goethe's *Metamorphosis of Plants*, is that the individual parts of the plant do not have a function in relation to *other* parts, but are rather, under the right circumstances, capable of all plant functions.[42] For example, 'the leaf is the principal seat of the action of the vital sap: but it absorbs, just as well as the root and the bark, since it already stands in a reciprocal relation with the air.' Thus, Hegel goes on, 'each member does not have a special function as is the case in the animal',[43] but is, instead, 'self-subsistent'.[44] This is why, in growth, the plant ramifies into a 'plurality of individuals'. Such a process defines the specific vital subjectivity of the plant, which 'preserves itself by multiplying itself.'[45]

Thus, according to Hegel, the plant is a uniquely structured organism on account of the fact that it is a multiplicity of parts that are themselves 'individuals'. It is perhaps helpful to take a step back from the logic of the vegetal organism and consider its structure as occupying a mediating position between the geological and animal organism. Much like the earth which logically precedes it, the plant acts as a *basis* (*Boden*) for individuality to thrive.[46] However, the plant is a *living* basis, unlike the earth, because the plant, as basis, is *inseparable* from the individuals it grounds; the plant *just is* its multiplicity of individuals. On the other end of the 'organics' spectrum, we have the animal, which would be wrongly conceived of as a 'basis' for individuality. The animal self is rather the organic *wholeness* that results from the interrelation between its function-specific parts. If the earth is a whole that fails to take in its parts (i.e., the organisms that live upon its surface), and if the animal is a whole characterised by the determinate relationships between its parts, the plant is a composition of *part-wholes*, i.e., parts that are self-subsistent and capable of metamorphosis. But since its parts are in fact wholes unto themselves, the wholeness of the plant gets lost in its parts; there is no unique wholeness that results from the interaction *between* distinctive parts. As Michael Marder puts it, 'the independent strength of individual parts is won at the expense of the whole', since the whole *just is* its parts.[47]

There is one 'part' of the vegetal organism, however, that stands out from the rest as *uniquely* individual and therefore intimates what is to

come in the dialectic of life with respect to the wholeness of the animal organism. According to Hegel, the plant's flower expresses a limited form of the kind of selfhood characteristic of animal life. For the flower, unlike the other parts of the plant, exhibits a certain *inwardness*. In the blossom, 'the plant takes hold of itself, returns into itself'.[48] Rather than assimilating difference for the sake of endless growth, the plant achieves, in the flower, a determinate shape and an individual character, expressed in its colour (no longer a 'neutral' green) and scent (which is sensible at all times, not only when the flower is damaged).[49] Even more important, however, is the genital differentiation within the flower. Although Hegel understands this sexual feature of plant life to be superfluous for the reproduction *of the plant*,[50] it indicates the implicit *truth* of life: that genuine inwardness can only be achieved through an active relationship to other—and here this means sexually different—*individuals*. The flower thus attests to the fact that life is not yet fully developed when it seeks its selfhood in elemental nature. Life will have to be related *to life*; it will have to return to *itself* through *other* living creatures. This logic of life's self-relation through sexual difference, however, only becomes explicit—and therefore physically necessary for reproduction—in the animal organism, the final stage of Hegel's philosophy of nature.

Before we move on to the logic of animal life, it is worth noting that in the transitions from the chemical process to the earth and from the earth to the plant, no vital *force* has emerged in nature so as to distinguish the organism from inorganic matter. Beiser is helpful in making the point that Hegel does not grant organic beings a mysterious *élan vital* to distinguish them from the rest of nature.[51] The organic realm is differentiated from the inorganic realm on account of its rational structure alone. As I argued in Chapter 5, however, the structure of the organism is nonetheless qualitatively distinct from the structure of inorganic phenomena; Hegel refuses the notion that merely quantitative differences obtain between chemical processes and life. Instead, Hegel understands the living and non-living to be qualitatively distinct on account of the fact that the logical structure of the organism is entirely novel. By the time we reach the logic of the organism, nature has proven to involve not only self-movement (in celestial mechanics) and qualitative particularity (in physics), but also the kind of self-development that is realised only through a transformative relationship with self-externality itself. Organic existence is therefore achieved through a concrete modification of self-external nature. And Hegel is absolutely clear that this modification cannot be understood as a mere quantitative intensification of nature's chemical processes.[52] On the contrary, life is a self-sustaining, self-perpetuating activity that acts upon the world in such a way as to serve its own immanent purpose of self-preservation through change.[53] When this teleological transformation of the natural

world becomes fully explicit in the life of the animal, the engine behind the organism's activity of qualitative differentiation becomes explicit: life achieves its self-determining, purpose-directed existence through an active *negation* of self-external being.

### The Animal: Life Fully Realised

In order to understand why Hegel conceives of the organism as a negation of self-external being, we need to consider the life of the animal that is, according to Hegel, an *explicit* negation of self-external nature and consequently the highest form of life. There are a range of phenomena associated with animal life that Hegel interprets in terms of negativity, but the most basic feature of animal life which connects all of these phenomena is that the animal 'exists for itself over against [*für sich dagegen*] … non-organic nature',[54] and this oppositional relation to the natural world is accomplished through an active *negation* of that world. Such a negation is apparent in, for example, the digestive process. Whereas the plant endlessly takes in nutrients from an undifferentiated, elemental nature with which it wholly identifies, the animal isolates individual natural objects (including plants)[55] and *destroys* those objects for the sake of sustaining its own, distinctive life. The animal, therefore, exists *for* itself precisely in opposing itself to an objective (*gegenständlich*) nature—a nature that, we should note, only takes on the character of objectivity once it enters into this oppositional (*gegensätzlich*) relation. Thus, in opposing itself to its environment, i.e., in relating to nature as objective, the animal achieves a certain *subjective* being that was lacking in plant life. For the animal develops a relation to itself as distinct from and, indeed, *other than* the world it opposes. In doing so, the animal lives a life of *inwardness*.

This animal 'inwardness' is expressed in various ways, but above all it is expressed as sentience.[56] To feel, according to Hegel, is to live out a certain interiority. As Pinkard notes, this is not the interiority of the body, as if there were objective nature beyond the epidermis and subjective life within.[57] Corporeal internality is just as spatially extended as any other part of nature, and it is precisely this extended materiality that is sublated in the 'inwardness' of life.[58] Organic inwardness must therefore be understood as an actual negation of spatial extension, such that the inner life of the animal is grasped not as a spatial 'inner', but as an *activity* that is, in an important sense, immaterial. Sentience is the most basic expression of this immaterial inwardness, since sensations are not spatially extended, but are rather felt *by* a being which, in its sentience, relates to itself as differentiated from its world. Such a relation-to-self is therefore strictly 'ideal' or formal—an immaterial, structural feature of life.

But in what sense is this non-spatial, immaterial feature of life a *negation* of extended materiality? According to Hegel, in relating to itself *as a self*, the animal organism negates the self-external character of nature, and it does so despite its own naturalness (and herein lies the contradiction at the heart of life, to which we will return below). The animal feels *its* pain, *its* hunger, *its* reproductive drive, and these sensations are *its own*. In feeling the warmth of the sun, the animal negates the sensuous quality of heat as being simply 'out there' and draws it into the interiority of its life as *its* sensation. The heat of the sun is thus negated as simply objective and made to be something felt by a subject. Consequently, in sensation (*Empfindung*), the organism finds itself (*findet sich*) as the ontologically distinct being it is. For this reason, with the emergence of sentience, life comes into its own as active self-relation, sublating nature's essential characteristic of being *outside* itself. Although Hegel reserves the concept of 'experience' (*Erfahrung*) for far more complex phenomena associated with spiritual freedom, we might say that with animal feeling, the organism 'experiences' the world in a non-conscious manner. Such an 'experience' or feeling of the world is central to what it means to be truly alive, hence the impoverished character of non-sentient life (i.e., vegetation). It is essential to Hegel, then, that mere sensation is in fact a form of freedom. It is only through *pathos*, through suffering or undergoing something, that the animal enters into a relation *to* itself as distinct from the external world. Life is thus a relation-to-self in which the self-externality of nature is overcome. As Hegel puts it, in life the Idea 'burst[s] the shell of [its] outer existence and [becomes] for itself',[59] an ontological accomplishment for which nature has striven since its logical beginning with the material longing-for-selfhood expressed in gravitational motion.

It is worth emphasising that Hegel understands this organic self-relation to proceed from the life of the animal itself. As Hegel remarks, 'the subjectivity of the animal is not simply distinguished from external Nature, but the animal distinguishes itself from it; and this is an extremely important distinction.'[60] Life, therefore, is not only structurally distinct from inorganic nature, but its ontological structure is achieved by a natural entity that actively overcomes, at least in part, its naturalness. Below, we will see how this achievement of life prefigures the more radical liberation of spirit from nature. At this stage, we need only focus on Hegel's idea that life is an ontological accomplishment, that life is only possible through an immense struggle on the part of the animal whose feeling is by and large one of suffering. Importantly, however, inorganic nature has logically necessitated that there *be* such a form of nature that struggles in its inner life.[61]

That the sensations associated with animal life are fundamentally negative—pain, hunger, the sexual drive—is central to Hegel's conception

of the animal organism as the sublation of nature's self-external character. According to Hegel, it is only insofar as the animal is lacking that it can relate to itself, in the mode of feeling, as a distinct being. For the animal does not simply 'feel itself', but it feels itself *as lacking* something *other* than it. 'What is primary, therefore, in animal appetite is [that it] stands in need of an other which is its negative', an appetite which manifests itself as 'the unpleasant feeling of need'.[62] It is thus thanks to privation that the animal feels itself and is consequently driven towards ends that will rid it of this constitutive privation. To be driven in this teleological fashion is to have an urge (*Trieb*) to *overcome* 'the feeling of lack [*Gefühl des Mangels*]', to *negate* the negative existence of need.[63] But precisely because the feeling of lack is accompanied by a drive to sublate it, the negative character of animal existence is fundamentally productive, or, in Hegel's technical language, the animal's negativity is, implicitly, a 'self-negating negativity'. Hegel describes this doubly negative character of animality as an 'immanent and explicitly present contradiction' that allows the animal to relate to itself *as a self*. As Hegel puts it: 'A being which is capable of containing and enduring its own contradiction is a *subject*.'[64]

Such self-relation allows the animal to perform a number of feats that nature has hitherto been powerless to perform. For example, the animal can move itself in order to seek out its desired ends. In doing so, the animal does not only 'spontaneously determine its place'[65]—as do the planets in orbiting the sun—but the animal moves itself to qualitatively distinct places that suit its immanent ends, determining its 'place for resting, sleeping, and bearing its young'.[66] Such determination of place is far more autonomous than the merely mechanical expression of freedom Hegel considers in his celestial mechanics, for in this case self-movement is a *purposive* activity aimed at the maintenance of the individual's life and that of its genus (*Gattung*). Another sign of the animal's ontological distinctness, according to Hegel, is that it can give immaterial expression to its feeling, spontaneously giving voice to its interior life. Unlike metals and other natural entities that produce sound only when struck, the animal 'utters itself', producing sound 'of its own accord'.[67] Thus, whether seeking a place to rest or crying out in pain, the animal spontaneously determines itself as an individual life-process, a process characterised by an immanent aim to sustain itself beyond its 'negative' or privative existence (exhaustion, pain, hunger, etc.).

Because the animal's active self-determination is dependent upon its need for something external to it, the animal is entirely dependent upon the objective world in which it finds itself. Thus, we should note that animal life is *not* differentiated from vegetal life on account of some absolute independence from the world; on the contrary, the animal organism is just as dependent upon its environment as is the plant. The difference, according

to Hegel, is that the animal depends upon the inorganic as *other* than it, as a being which *it is not*. And this means that the dependence of animal life upon its natural environment is a dependence that makes the freedom or self-determination of animal existence possible. Self-determining subjectivity is not, therefore, cut off from its 'other'; freedom is a relation to self *via* alterity.

This logic of organic self-relation culminates in the reproductive process, where sentience doubles back on itself and an organism feels an urge to feel itself in contact with *another* individual organism, and yet an organism with which it is already implicitly identical, i.e., an organism belonging to the same genus.[68] According to Hegel, the reproductive drive is therefore nothing other than the sentient expression of the fundamental contradiction of life: on the one hand, the organism is a member of a genus and is, as such, nothing *other than* its genus; yet on the other hand, the organism is a *particular* individual and feels only *itself* such that its selfhood is limited to its particularity. The reproductive drive is the urge to sublate this difference between the organism as instance of its genus (i.e., the organism as universal) and the organism as particular individual. In seeking out its sexual other, the animal organism implicitly seeks to *identify* with its genus, to shed its limited perspective as a particular organism by feeling itself through *another* life which is in fact not *other* than it:

> The genus is therefore present in the individual as a straining against the inadequacy of its single actuality, as the urge to obtain its self-feeling in the other of its genus, to integrate itself through union with it and through its mediation to close the genus with itself and bring it into existence—*copulation*.[69]

In copulation, sexually differentiated organisms 'become in reality what they are in themselves, namely, one genus, the same subjective vitality', by entering into a sensuous relation productive of the genus itself, albeit in the form of another sexed individual.[70]

The animal thus undergoes the 'feeling of universality'.[71] But precisely because the animal only ever *feels* this belonging to its genus, this universality remains, for the animal, at the level of particularity. The universal selfhood of the genus is always felt by *this* particular animal, in *this* particular place.[72] And after the organism has served its reproductive purpose, it immediately returns to a state of need.[73] It is for this reason that, according to Hegel, the animal is intrinsically limited and the reproductive process, despite its perpetuation of the universal (i.e., the propagation of the genus), is not a 'truly infinite' process of absolute subjectivity. In the following section, I will consider in more detail why Hegel believes the reproductive process is a failed attempt, on the part of life, to achieve truly

universal selfhood. Before doing so, it is worth briefly reflecting upon the nature of the reproductive process as part of the overall logic of animality.

Organic life is an 'inner' life because the organism sets itself apart as an individual intrinsically related to its inorganic and organic 'others'. From digestion to reproduction, organic 'inwardness' negates the strictly self-external being of nature, for the individual is not *outside* itself but, on the contrary, becomes the individual it is through its relation to alterity. Thus, Hegel says, 'it is only in *life* that we meet with subjectivity and the counter to externality.'[74] However, the animal remains a *natural* subjectivity, because it only ever *feels* itself and is therefore caught up in the immediacy of its spatially extended existence. This places an unsurpassable limit upon any life that remains strictly biological. And yet, through the logic of the organism we learn that the Idea, or reason—i.e., being itself—does not remain external to itself in its real manifestation as nature. On the contrary, the Idea overcomes its expression as inorganic, self-external being and begins to show itself as the self-determining activity it is implicitly. Thus, although animal life remains intrinsically limited on account of its natural particularly, it also necessitates the transition to a *fully* interior life, a life no longer plagued by the self-externality of nature. In other words, the logic of animal life necessitates that there be a self-developing life which is no longer natural. This non-natural life is spirit.

### Death and the Spirit as Phoenix

Animals are heavy. If an animal loses its balance—a rare occurrence in healthy animals, to be sure—it falls. Even when animals spontaneously determine their place, as they ordinarily do, they remain grounded in the particular place they freely occupy, weighed down by their materiality. On Hegel's view, this is a sign that the animal never fully overcomes the logic of gravitational motion (i.e., the striving *for* subjectivity discussed in Chapter 6), since the organism is a *spatially extended* existence.[75] As such, the animal remains an *external* expression of the Idea, or reason. The inner freedom that we have seen develop in nature, therefore, is always a limited form of freedom, one that is ultimately subject *to* nature,[76] precisely because this 'subjectivity is still a *natural* one'.[77]

Yet as we saw above, the fundamental feature of animal life is not some material or substantial characteristic, but a strictly formal or structural feature: the organism's relation-to-self. Every material aspect of the animal is replaced over time, a regenerative activity of being-for-self through which the animal maintains itself through change.[78] The animal organism is therefore not essentially its material substance—which is replaced every 'five, ten, or twenty years'—but its subjective activity, the very activity of self-relation which makes organic regeneration possible. Thus, even if the

individual animal remains weighed down by its materiality, the logic of life *as such* promises a free existence that rises above materiality altogether. In order to understand how such transcendence is possible and in what sense Hegel thinks that spirit is a non-material reality emergent from animality, we must consider more closely the final stages of the organics.

In the reproductive process, the organism feels itself at home in its universality, i.e., in the genus of which it is an instance. The sexual relation results in the generation of another organism, and in this way the paternal organism arrives at its immanent *telos*: to sustain its genus through differentiation, achieving universal selfhood through the reproduction of a distinct individual. But in realising its *telos*, the organism no longer needs to sustain its *own* life for the sake of the genus.[79] Its ultimate end, as a living thing, has been accomplished, and so it no longer needs to *be* after the sexual act (although not all organisms come to their end immediately following copulation).[80] In giving itself over to the life of its *kind*, sustaining the process of the *universal* self or genus, the individual proves that its individual life is not in fact the truth or ultimate aim of its individual existence. As Hegel puts it, after reproduction the living individuals 'have no higher destiny' and must eventually, therefore, 'meet their death'.[81] Death is thus an ontologically necessary feature of the life-process, finitude being immanent to the animal. Certainly, the empirical cause of an individual organism's death is contingent and ordinarily has little to do with the animal's self-determining existence.[82] But *that* the animal dies of contingent causes is necessitated by the intrinsic logic—and therefore being—of animal life itself.[83] The life of the individual organism is thus finite by its very nature.[84]

But what of the infinite life process, that life which is made possible by the reproductive activity of finite, individual organisms? How does Hegel understand the universal life of the genus, which is sustained over generations of individuals? Has this process not achieved truly infinite existence?

> The genus, which produces itself through negation of its differences, does not, however, exist in and for itself but only in a series of single living beings: and thus the sublation of the contradiction is always the beginning of a fresh one.[85]

The contradiction of life, we recall, is that the organism is, on the one hand, an individual, and on the other hand, an instance of the universal, its genus. In reproduction, this contradiction is momentarily overcome for the paternal organism, but the contradiction reemerges with the generation of *another* individual which is itself a particular life and an instance of its genus. This is the means by which life continues itself through difference, by

momentarily overcoming its contradictory nature and subsequently falling back into contradiction. For this reason, Hegel understands the reproductive process to signal not only the death of the individual organism, whose self-sustenance becomes superfluous after reproduction, but the intrinsically limited character of life *as such*. On Hegel's view, the total life process is a spuriously infinite process of reproduction. One organism, whose end is the perpetuation of the genus, generates another organism, which in turn seeks to overcome its contradictory nature through reproduction, and so on ad infinitum.

This process as a whole is never *lived* by a single organism; it never 'exists in and for itself'.[86] Thus, although life involves the overcoming of its own finitude, there is no being that goes on living after its end—no individual that continues to sustain itself throughout the total life process, for instance, through sensation. Indeed, because the genus is a universal self, and not a particular individual, the genus is incapable of relating to itself through sensation, which is bound up with a particular spatiotemporal existence. We can see from this that, sensation, which defines the self-relation of animality, will never achieve the universal selfhood promised by the logic of life. An activity far more detached from material particularity will be required in order for truly infinite subjectivity to be realised.

It is here that spirit first makes its appearance in Hegel's system. Spirit emerges from nature as the *explicit* universal selfhood that determines itself through difference—and comes to know itself as an activity that is ontologically distinct from self-external, material nature. Whereas life was the natural *telos* of nature, spirit is its *non*-natural *telos*, an emergent form of reality that, while physically and ontologically dependent upon animal life, is incomprehensible from the perspective of speculative biology.

> Spirit has thus proceeded from Nature. The goal of Nature is to destroy itself and to break through its husk of immediate, sensuous existence, to consume itself like the phoenix in order to come forth from this externality rejuvenated as spirit. Nature has become an other to itself in order to recognize itself again as Idea and to reconcile itself with itself.[87]

The systematic transition from nature to spirit is not the only place we find Hegel describing spirit as an emergent phoenix. He also invokes this image in his 1831 *Lectures on the Philosophy of Religion*, in which he claims that the 'representation of the phoenix, a death that is the reentry into a rejuvenated life … *this is what spirit is*.'[88] Hegel's identification of spirit as a phoenix rising from its own ruin is central to his understanding of the transition from nature to spirit, and yet this image is far more ambiguous than it appears at first glance.

In the same lectures of 1831, Hegel makes the following remark: 'The eternal nature of spirit is to die to itself, to make itself finite in natural life, but through the annihilation of its natural state it comes to itself.'[89] There are many passages in both Hegel's *Encyclopaedia* and lectures that resonate with this passage, and the general idea that Hegel articulates here has often been read as though spirit *becomes* nature, as though it releases itself into exteriority in order to subsequently raise itself beyond that derivative, finite, natural state. On this interpretation, the phoenix represents spirit precisely because the phoenix annihilates itself and through this self-annihilation *re*emerges from its ashes. The image of the phoenix, in other words, illustrates the idea that spirit's self-destruction makes possible spirit's return to itself. It is this interpretation of spirit that I have called into question throughout the last four chapters of this book. Such an interpretation makes of Hegel's system an anthropocentric, or at the very least pneumatocentric, system in which nature is presented as ontologically derivative. Since I defend the view that nature is ontologically more fundamental than spirit for Hegel, it is perhaps worth offering an alternative interpretation of Hegel's identification of spirit as self-annihilating phoenix.

As I argued in Chapters 4 and 5, those who read Hegel as understanding nature to be self-external spirit fail to distinguish between the meaning of the Idea, on the one hand, and spirit, on the other. The Idea, or self-determining reason, is *what there is*—it is being itself. But the Idea must express itself, must become manifest, in order for it to truly *be*. (And Hegel rejects the idea that there could be some essential being that does *not* make itself manifest.) At its most basic level, the Idea expresses itself as *other* than itself, as *not* being what it is. This initial manifestation of the Idea is *nature*—self-external reason. It is only at a logically—and therefore ontologically—subsequent stage that this Idea begins to express itself *as* itself, at peace with itself in its real, worldly activity. This secondary manifestation of the Idea, or reason, is *spirit*—reason that has *come into its own*. The emergence of the phoenix from its ashes should therefore be understood as a novel event within Hegel's system, that is, an event that *only* describes the nature of *spirit* and not ideal being, or reason, more generally. There is thus good reason that Hegel doesn't describe the Idea, at the end of the *Logic* as emergent from its ruin, for it is only with the unique ontological structure of spirit that self-determining reason comes on the scene as *real*.

That being said, the phoenix is an image of cyclical emergence, a symbol of *re*generation and *rebirth*, not of natality. It is understandable, then, that readers of Hegel have often understood spirit to undergo *its own* annihilation in a transition to nature and, subsequently, to *re*emerge as spirit rejuvenated. But there is more than one way to understand the cyclical character of spirit's emergence. To be sure, one can envision this as a

process in which spirit returns to itself after releasing itself into exteriority. But such an interpretation makes Hegel's system far too 'representational', as if there were an actual, historical process in which something called spirit actively released itself into nature and subsequently emerged from that exteriority. This cannot be what Hegel has in mind. As I understand it, the image of the phoenix speaks to the *eternal character* of the logic, or the ontological structure, of the nature-spirit relation. Recall that, so long as we remain focused on the logical development of Hegel's system, spirit doesn't emerge in time any more than the Idea annihilates itself in time. The transitions from logic to nature and from nature to spirit do not describe historical events, but ontological structures that are intrinsically kinetic; through their dialectical motion, these structures demonstrate their eternal significance. Spirit is an ever emerging process—and therefore one can visualise this as a 'reemerging' process—through which self-external nature turns back upon itself and dispenses with its material, spatially extended existence. The phoenix, then, is an appropriate image for spirit because it is the image of a life that perpetually emerges through negativity.

On my view, there is indeed an intrinsic limit to Hegel's conception of spirit as phoenix, but it has nothing to do with the mistaken idea that he understands nature to be derived from spirit. As I will argue in Chapter 8, Hegel's Heraclitean conception of spirit as self-consuming fire rules out the compelling possibility that spirit emerges in time as a consequence of a rationally explicable natural history. This critique of Hegel can only be made, however, once we acknowledge that spirit, for Hegel, is indeed logically emergent, which means it is ontologically dependent upon nature. That is to say, it is only because the ontological structure of nature necessitates the existence of spirit that there *is* spirit at all. To acknowledge this is to acknowledge that the Hegelian phoenix in no way precedes (logically or ontologically speaking) the negative existence from which it perpetually arises.[90]

But how does spirit perpetually arise from the self-external being of nature? Much like the active negation of inorganic nature which distinguished the animal from its environment, spirit emerges from nature through an *active negation* of nature: 'spirit … *distinguishes itself* from nature, so that this distinguishing is not merely the act of an external reflection about the essence of spirit' but is accomplished *through* spiritual activity itself.[91] Yet unlike the animal, which effects only a *sensuous*, and therefore particular, negation of nature, spirit accomplishes a far more radical *break* with nature, a break realised in an activity that allows the spiritual existence to 'withdraw itself from everything external *and from its own* externality'.[92] Thus, although dependent upon sensuous existence for its activity, spirit freely determines itself in abstraction from its

immediate desires in the transcendence of its sensuous existence. This is why Hegel reserves the concept of '*absolute* negativity' for the activity of spirit.[93] In this absolute negativity, the self-negating negativity of organic life becomes fully explicit as a total negation of nature, and in this way, spirit differentiates itself as qualitatively distinct from organic life. The most straightforward way in which this is apparent in Hegel's system is that spirit *liberates* itself from nature, an activity of self-emancipation which has not one analogue in the progression of nature from the mechanics to the organics. For this reason, spirit should be seen not as the highest stage of nature, but as a novel ontological stage within Hegel's *Realphilosophie*, a stage requiring an entirely separate account of its reality. Such an account is found in the third and final part of Hegel's *Encyclopaedia*, the philosophy of spirit.

## The Inner Unity of Spirit

Up to this point, I have made little reference to human existence in Hegel's system. But this should not imply that Hegel has nothing to say about human life in the philosophy of nature. The human is an animal, and for this reason everything Hegel describes in the dialectic of animal life pertains to the human *as* animal.[94] Hegel has reasons, however, not to emphasise the biological dimension of human life, postponing his explicit consideration of the human until the final part of his system. For the human is not simply *more* than biological, as if spiritual freedom were merely predicated of a particular animal life. If this were the case, then perhaps the organic human form would receive a more detailed consideration in the philosophy of nature. But for Hegel, the properly human dimension of humanity is precisely its *spiritual* activity. Therefore, the philosophy of spirit—and not the philosophy of nature—is the sole domain of Hegel's ontology which inquires into the being of 'man as man, and, that always must be, as spirit'.[95]

Spirit is the real negation of nature, the negation not only of 'negativity' in general, but the negation of negativity expressed as a *world*, the negation of self-externality. Thus, spirit is a concrete being not simply because it is the determinate activity of self-determining reason (it is not simply 'the Idea' as self-negating negativity), but spirit is rather the *most* determinate form of being as the concrete, or real, *worldly* negation of the spatiotemporal world. Below, I will consider how it is that spirit is meant to *negate* nature, since, significantly, it is spirit's very activity which effects its liberation from nature. Here, I want to consider Hegel's formal definition of spirit as 'absolute negativity'. For it is absolute negativity that allows spirit to achieve the total inwardness which was still only implicit in animal life. Indeed, it is this absolute negativity that makes

spirit qualitatively distinct not only from inorganic nature, but from the natural subjectivity of the organism. As absolute negativity, spirit is the inward existence that transcends the lesser forms of inwardness we have seen throughout nature's rational progression (in gravity, light, and life).

These remarks should not, however, indicate that with the transition to the philosophy of spirit we finally have before us the ontological structure of a fully self-sufficient, inner being. If that were the case, then the philosophy of spirit would require a rather brief exposition in the *Encyclopaedia*. But as is always the case with Hegel, ontological determinations unravel through a laborious development, and even with the emergence of spirit at the end of the philosophy of nature we have yet to arrive at Hegel's account of spirit *as such*.[96] The account of 'spirit as such' is found near the end of the first part of Hegel's philosophy of spirit, i.e., the philosophy of subjective spirit, which includes Hegel's speculative anthropology, phenomenology, and psychology. As Murray Greene remarks, the entire logical development contained in the dialectic of subjective spirit is a *Befreiungskampf* or 'liberation struggle', indicating that even once we have transitioned from mere animal nature to human spirit with Hegel's anthropology, spirit has not fully liberated itself from the self-externality of nature.[97] Such liberation only comes about with the logical emergence of thought, near the end of the psychology—a moment that prefigures the final and highest stage of the *Encyclopaedia* as a whole: philosophy and its history.[98]

There would be good reason, then, to continue tracing the logic of emergence through the entire development of subjective spirit, at least up until the appearance of thought in § 465. For although spirit logically emerges from nature as the explicitly subjective reality implicit in organic life, it first does so only as soul (*Seele*), or what Hegel also calls 'natural spirit' (*Naturgeist*). The philosophy of spirit therefore begins with a stage of spirit 'which is still in the grip of nature and connected with its corporeity, spirit which is … not yet free'.[99] I will not, however, provide an account of spirit's *Befreiungskampf* from soul to consciousness to thought. Instead, I will consider straightaway the defining activity of spirit, i.e., thought, which most explicitly distinguishes the life of spirit from that of the animal and thereby accounts for the ontological difference between human and animal.

Above, we considered how the animal organism spontaneously determines its own life thanks to its self-relation in the form of sensation. And yet despite this subjective self-relation, the animal organism only ever feels its *particular* self. Consequently, animal subjectivity remains tied to its spatiotemporal idiosyncrasy. The human is distinct from the animal insofar as the human spirit relates to itself not only in sensation, but also in thinking:

> It is man who first raises himself above the singleness of sensation to the universality of thought, to self-knowledge, to the grasp of his subjectivity, of his 'I' in a word, it is only man who is thinking mind and by this, and by this alone, is essentially distinguished from nature.[100]

It is this thinking activity that allows spirit to liberate itself from the natural world by *negating* its self-externality and thereby constituting itself as a truly 'inner' existence. Again, exactly *how* thought 'negates' self-externality will not become clear until we look more closely at Hegel's account of thought in the psychology. What is essential to grasp at this stage is that spirit is an *inner* being that is fundamentally different from the nascent forms of subjective inwardness found in nature. And spirit is different from or other than these forms of natural selfhood insofar as spirit is in no way *external* to itself but is instead utterly 'one' with itself. It is helpful to begin with this basic structure of spirit, as outlined at the beginning of the philosophy of spirit, in order to understand why Hegel subsequently identifies thinking as the quintessential spiritual activity.

Because nature is *other* than itself, and because spirit is the *negation* of this self-otherness, spirit is intrinsically *unified* with itself. This does not imply that spirit is a selfsame or undifferentiated kind of thing. On the contrary, spirit is unified with itself *through* its internal differentiation. And this has important systematic implications for Hegel's *account* of spirit in the *Encyclopaedia*. To the extent that spirit is indeed differentiated from itself, the philosophy of spirit will resemble the graduated sequence of stages in the philosophy of nature. Indeed, Hegel's philosophy of spirit must take into account the various forms of theoretical and practical activities that define the life of spirit, and these forms are shown to be rationally connected in a logically progressive system of 'stages'. But precisely because these theoretical and practical activities are the activities *of a unified spirit*, they are not *autonomous zones* of spiritual life. And it is here that nature's self-externality and spirit's inwardness lead to significant differences between the dialectic of nature and the dialectic of spirit.

In nature, gravitational motion is ontologically distinct from chemical processes, even though there is an underlying, rational connection between these features of nature. But when we turn to the real manifestation of *inner*, *subjective* activity, this stratified character of reality is overcome. 'The determinations and stages of spirit … are only essential as *moments*, *states*, and *determinations* in the higher stages of development.'[101] Thus, according to Hegel, the lower stages of spirit do not exist separately from the higher stages in the way the lower stages of nature exist separately from the higher stages of nature.[102] Whereas inorganic processes can be found existing on their own, untouched by any organic life—and whereas plants and animals exist apart from one another as distinct things—lower-level

forms of *spiritual* existence, such as dreaming and intuiting, take place within a more robust life of the mind. This is why Hegel dismisses empirical psychology and all other conceptions of mind that depend upon separating mental activity into ontologically distinct faculties. Spirit is better understood as a self-differentiated, processual whole composed of moments, as opposed to nature which is rightly conceived of as a system of stages only implicitly connected to one another. If Hegel is to be seen as a 'strong organicist' in the *Realphilosophie*, then this organicism pertains exclusively to *spirit*'s organic unity.

Hegel notes that, because the lower stages of subjective spirit are explicitly connected to the higher stages, it is tempting to *reduce* the higher stages to the lower stages. But if the idealist philosophy of nature has taught us anything, it is that higher stages of reality, despite their ontological dependence upon lower stages, are utterly irreducible to those lower stages. And this remains the case whether we are considering the ontological structure of a stratified, self-external nature or a unified, self-differentiated spirit. The particular spiritual activities Hegel has in mind when he notes the reductionist temptation with regard to human life are thought and feeling. For if thought always appears in conjunction *with* feeling (thanks to the unified character of spiritual life), then it is relatively easy for a philosopher to interpret thought in terms of feeling.[103] But Hegel insists that thought is notionally separable from the feeling that accompanies it, hence the separate accounts of feeling and thought we find in the *Encyclopaedia*. Hegel acknowledges and, indeed, drives home the point that thought is pursued by particular human beings who *feel* themselves thinking 'especially in the head, in the brain, in general in the system of sensibility'.[104] But what those thoughts consist in is, according to Hegel, in no way particular in the way feeling is particular, i.e., as felt by a *particular* being. And this is why, as we will see, 'the universality of the "I" enables it to abstract from everything, *even from its life*.'[105]

Abstracting from the particular is one of two defining features of thought, and one which can be misleading if it is not understood in conjunction with thought's second defining feature. I will therefore consider abstraction in more detail in the following section. My aim here is to argue that spirit's self-identity does not rule out the idea that certain spiritual activities are notionally distinct from other activities and that, consequently, the intrinsic unity of spirit is entirely of a piece with Hegel's anti-reductionism. Indeed, once we begin to consider Hegel's conception of spirit as a self-differentiated unity, we see that Hegel's anti-reductionism extends beyond the physical-organic realm and into the realm of spirit itself. Moreover, just as Hegel's anti-reductionism regarding natural diversity turned on a form of emergentism, the same goes for his conception of the inwardly unified yet differentiated structure of spirit. To see this,

we need only acknowledge that thought—the very feature of spiritual life which distinguishes it absolutely from the life of the animal—emerges at a relatively late stage in the dialectic of spirit.

Considered in its ontological distinctness, thought is structurally dependent upon the pre-conceptual, proto-cognitive forms of spiritual activity that precede it in the logic of subjective spirit. Thought is therefore ontologically dependent not only upon nature, but on a vast array of spiritual activities, some of which (such as habit and mechanical memory [*Gedächtnis*]) recall the mechanical, inorganic stages of nature discussed in Chapter 6.[106] It is therefore important to emphasise, along with Houlgate, that Hegel doesn't 'guarantee' thought from the beginning of the philosophy of spirit, as if thought merely 'passed through' its mechanical and inorganic stages on the way to its preordained self-fulfilment.[107] On the contrary, the distinctive activity of thinking is possible only through the rational unfolding or explication of pre-conceptual spiritual activity.

And yet the emergence of thought within the philosophy of spirit should be distinguished from the emergence of natural forms in the philosophy of nature. Once we learn that thought is indeed the *truth* of spirit—once we learn that it is spirit 'as such'—we *retrospectively* discover that all of spirit's activities are intrinsically united with the activity of thinking and are, in fact, abstract expressions *of thought*. In other words, human feeling, perception, imagination, all of these spiritual activities are, in a sense, activities of thought, yet thought which has not fully liberated itself from its material situatedness. As with nature, then, Hegel intends to distinguish the logical structures of various spiritual activities and show how the higher, more sophisticated structures are dependent upon the lower, more abstract structures. But unlike nature, where distinct logical structures are typically expressed, in reality, as *separate* from one another, distinct logical structures of subjective spiritual life are found within one and the same individual as lesser and greater expressions *of that individual's rational life*. It is for this reason that Hegel can unparadoxically claim, on the one hand, that thought distinguishes the human spirit from the animal organism, and on the other hand, that thought is ontologically dependent upon non-biological, *spiritual* activities which are themselves only implicitly cognitive. For these spiritual activities of spirit should be understood, retrospectively, as abstract expressions of thought writ large.

## Thought

For Hegel, the human spirit is not, technically speaking, endowed with a 'capacity' for thinking, since spirit is precisely an inwardly unified existence and the mind cannot, therefore, be said to be a thing with separately existing capacities or faculties. Moreover, thought would be the moment

of spiritual life *least* analogous to a psychological 'faculty', since *all* of spirit's activities—including sensation,[108] habit, perception, desire, intuition, and imagination, to name a few—are lesser or greater expressions of thought writ large. Thought is therefore far too central to the total ontological structure of spirit for it to be a mere capacity or faculty of human nature. According to Hegel, the 'principle' of spirit, 'its unadulterated selfhood, is thinking'.[109]

In what sense, then, can the pre-conceptual moments of spiritual activity be understood as modes of thought? To answer this question, we need to consider what unifies the various moments of spirit. Bracketing those peculiar and yet necessary moments of radically self-*external* spirit such as mechanical memory, the logical development of spirit, up to and including thought, can be characterised as a process of 'internalisation' or 'incorporation'.[110] According to Hegel,

> Every activity of spirit is nothing but a distinct mode of reducing what is external to inwardness which spirit itself is, and it is only by this reduction [*Zurückführung*], by this idealisation or assimilation, of what is external that it becomes and is spirit.[111]

Note that the procedure of 'internalising' the external is not performed by an already existing spiritual life. Rather, spirit *becomes* a self in bringing the external *into* itself. We have, of course, already seen this logic at work in the dialectic of the animal organism, hence the ontological continuity between life and spirit. And just as life remains weighed down by its own materiality, so too do the lower stages of spiritual activity fail to internalise the external absolutely. Thus, the more abstract activities of spirit, such as intuition, only ever get so far in 'idealising' or 'assimilating' external difference; a minimal quantum of materiality always remains unassimilated in the pre-conceptual activity of spirit. As Greene puts it, spirit is, in its anthropological, phenomenological, and psychological development 'still engaged in overcoming its spatially and temporally conditioned modes of "pictorial thinking" just prior to its attainment of notional thinking (*begreifendes Denken*).'[112] With thought, however, which 'internalises' the external as rational structures or forms (as opposed to sensuous impressions, images, and so on), spirit shows its true character as the *absolute* idealisation of the external:

> Thought alone is able to experience what is highest, or what is true […] Thought says farewell even to this last element of the sensible, and is free, at home with itself; it renounces external and internal sensibility, and distances itself from all particular concerns and inclinations.[113]

Thought is therefore the highest and least 'subjective' form of subjectivity, insofar as it gives up its particularity in order to become a *true* self by taking up the demands of conceptual activity. It is in this sense that thought is an '*unadulterated* selfhood'.[114] For thought is unaffected by the feelings, perceptions, and generally sensuous existence which make it possible.[115] As we saw above, Hegel conceives of thought as an *abstraction* from the particular. Now we can see that thought is an abstraction insofar as it 'lets go' of its immediate circumstances.[116] 'When I think, I give up my subjective particularity, sink myself in the matter, let thought follow its own course: and I think badly whenever I add something of my own.'[117]

We should note the Schellingian character of Hegel's line of reasoning here. To the extent that thought is philosophical or truly rational, it is not *the philosopher* who is *doing* the thinking; truly rational thought occurs only when one has abstracted from their subjective perspective and sunk into whatever it is that is to be known. Hegel highlights for us that something similar happens even in ordinary or non-philosophical thought: whenever a person is thinking, she is in some important way transcending the immediacy of her particular situation.

But if the individual lets go of her particularity, in what sense is this individual a 'self'? Haven't we seen throughout the development of nature that selfhood is achieved in the unique, particular forms of existence that distinguish themselves from that which they are *not*? And at the higher levels of natural organisation, isn't the feeling of oneself as a particular individual necessary for the achievement of organic subjectivity or selfhood? Certainly, selfhood must pass through a logic of particularity in order to separate itself from what is *other* than it. This was key to the transition from mechanics to physics. And to relate to oneself *as* a self, one must indeed relate to oneself as particular, hence the necessity of sensation in life. But we have also seen that, for Hegel, 'selfhood' always signifies *self-determination*, be this the self-determination of the planets in their elliptical orbits or the self-determination of life as the maintenance of self through suffering. It is this notion of self as self-determining which Hegel identifies as the 'unadulterated selfhood' of thought. Particularity played a key role in *getting* us to subjectivity, but subjectivity *as such* is defined by self-determination.

That thinking is a process of self-determination is absolutely central to Hegel's conception of spirit, for it is through the self-determination of thought that spirit realises itself as a free existence. Thinking is a free activity, according to Hegel, for two interrelated reasons. First, the movement of thought is *immanent*. As we have seen, thought determines *itself* and thus gives itself its own law; rational thought is autonomous. Second, because this immanent activity allows an individual to withdraw from her particular circumstances, thought opens the human up to a truth

*beyond* the here and now. Thus, not only does the thinking individual conceive of spatiotemporal places which are beyond her surrounding environment (e.g., in recollection and imagination), but that individual thinks beyond her own existence entirely, abstracting from her *own* particularity in order to contemplate the movement of *logos* as such—a free or self-determining movement in which the participating individual herself becomes liberated from the self-externality of her sensuous existence.[118]

It is this abstraction from the particular that signals the ontological difference between the self-determination of thought, on the one hand, and that of life, on the other. To be sure, life is a freely self-determining activity in which an individual sustains itself through change. This sets life apart from inorganic nature, which ceases to be the qualitatively particular being it is as soon as its qualities undergo transformation. But spirit is even more plastic than life, since spirit—in the form of thought—continues to sustain itself, and *explicitly* so, through the death of the individual.[119] For the movement of thought continues to relate to itself no matter *who* is doing the thinking. This is why thought is explicitly universal, unlike the merely implicit universality in the life-process of the genus. Hegel's idea is provocative in our contemporary intellectual and moral landscape, in which life is presumed to be the horizon of all value, but it is a clear continuation of Kantian (and pre-Kantian) rationalism: when I am thinking, I am indeed thinking *my* thought, but this thought is not *exclusively* mine; *my* thinking—the thinking in which I participate and to which I fundamentally belong—is nothing other than the thought of *all* rational beings.[120] Thought is in this way structurally distinct from the feeling of animal life, since that feeling is indexed to a particular organism's experience.[121]

To be clear, Hegel recognises that thought is experienced by finite individuals—hence its location within the philosophy of *subjective* spirit. Even philosophical thinking 'takes place' in time and therefore involves particularity in the form of historical determinateness. But the being of thought, unlike the being of sensation, transcends its particularity. In the case of the most essential form of thinking—philosophical thinking—we are dealing with an activity that is the felt, particular, historical expression of the *absolute, universal, and atemporal movement of reason*, to which all beings—thinking and otherwise—belong. Thus, even though nature is the ontologically primary expression of reason, it is not until we arrive at the logical emergence of spirit that reality sheds its self-external character and determines itself explicitly as the movement of reason in the activity of thinking.

In order for spirit to achieve this standpoint of universal thought, however, the manner in which it 'internalises' external nature must be modified. So long as spirit relates to nature as *other* than it, as a nature *opposed to* spirit, the 'assimilation' and 'idealisation' of nature will remain

incomplete. For any opposition *to* nature as simply 'other' than the 'I' harbours the practical assumption that what is external to spirit requires transformation in order to be assimilated, to be moulded into an intelligible form. And it is this practical assumption that nature must be idealised by something *other* than it which thought overcomes. We would be wrong to assume, therefore, that thought acts *upon* the external world in an oppositional fashion. To be sure, thought, according to Hegel, 'negates the externality of Nature, assimilates Nature to itself and thereby idealizes it.'[122] Yet since thought does not *oppose* itself to the material world, but rather *lets go* of its particular, embodied worldview, thought 'idealises' nature in a very important way: by letting the external show *itself* to be *intrinsically* rational.[123]

As we have already seen, Hegel conceives of nature as 'outside itself', but he *also* understands this very ontological determination to be a *rational* determination, one which is intrinsic to nature itself and can potentially be grasped by thought. And this has significant implications for the manner in which thought can be said to be 'free from externality'. According to Hegel, the inner freedom of thought is not, at its highest and most truthful expression, in *opposition* to externality, since nothing lies *beyond* rational thought such that it could possibly be determined by something radically 'other' than it. When thought appears to be determined by 'external' circumstances, such as particular feelings or habits of mind—as happens in 'bad thinking'—then thought isn't properly rational.[124] In fully rational thought, one closes the gap between the external and the internal by entering into a thoughtful consideration of the inner, rational truth *of* the external.[125] Thought, according to Hegel, 'is a plain [*einfache*] identity of subjective and objective. It knows that what is *thought*, *is*, and that what *is*, only *is* in so far as it is a thought [*Gedanke*].'[126] Note that Hegel does *not* say that what *is*, only *is* in so far as it is thought (*gedacht*), i.e., in so far as it is in fact contemplated. The point is rather that the being of beings—including natural beings—is rational and is therefore in principle capable of being understood. Spirit is the form of reality that is truly free because its inwardness is not achieved in endless opposition to that which is other than it. That which is other than the mind is, in principle, intelligible, and so this is an 'other' in which thinking is entirely 'at home'.

The form of inwardness demonstrated in the activity of thinking is therefore different from the forms of inwardness we have considered up to this point, and yet it is the explicit manifestation of what was implicit in those more basic forms. Recall that the self always achieves its self-identity, or at the very least strives to do so, through *difference*. In thought, this identity in difference becomes absolutised, no longer clinging to a kind of residual selfsameness set apart from its other. In thinking, spirit does not set itself over against the objective world, but rather proves its ability

to 'be at home'—i.e., to be *itself*—even within the nature which it *is not*. Thought is therefore universal not only because it is common to all who think rationally, but because it is in communion with *all* beings, with each and every expression of the absolute 'Idea', however self-external. Spirit is thus at home with itself even where it is least familiar, in nature.

In other words, there is no fundamental limit to thought—there is nothing that exists which cannot, in principle, be thought. To insist upon such a limit to thought is to refuse thought the status of robust inwardness and reduce subjectivity to an activity set apart from, or outside, that which is. In this way, pre-Schellingian idealism is, from a Hegelian perspective, an impoverished form of philosophy.[127] By contrast, the absolute idealist abstraction from the particular attempted, even if unsuccessfully, by Schelling points in the direction of the most thoughtful and concrete form of philosophy. And that is because it is motivated by the realisation that thought is entirely at home with itself in the impersonal, sensuous world, rationality being at work in even the most apparently irrational phenomena.

As I have suggested, at its highest, most perfect stage of ontological development, thought is philosophical for Hegel.[128] The implications of this for our study of the philosophy of nature are significant: explaining spirit's *philosophical* activity as emergent from nature provides us with a higher-order justification for the philosophy of nature as a legitimate scientific programme, since spirit proves to be the kind of thing that is in fact capable of grasping the rational forms that appear within the realm of irrationality (i.e., within nature). But more importantly, we can now understand with greater clarity how the philosophy of nature was possible in the first place. Were the human spirit not at home in nature, the philosophy of nature could not have been pursued by a human mind. But precisely in *thinking*, the mind *is* at home in that which is *other* than it; the theoretical activity of the philosopher of nature should therefore be understood as the paradigmatic case of spirit's liberation from nature.[129]

For Hegel, thought opens the human up to the entire cosmos of the self-external. Of course, this need not—and ordinarily does not—take the form of philosophical knowing. At a more basic level, the human simply thinks conceptually, and not systematically, about the world. And it is this which, as we have seen, distinguishes the human from other forms of life. 'Man, as the universal thinking animal, has a much more extensive environment and makes *all* objects his non-organic nature and objects for his knowing.'[130] Here, Hegel articulates the Herderian idea that the place of the human is the *whole* of nature, and not a particular locale.[131] Yet *pace* Herder, Hegel understands the essential feature of this global humanity to be its more-than-linguistic *logos*, i.e., a *logos* expressed in language but

irreducible to its sensuous expression.[132] For thought is not reducible to the linguistic particularities of this or that people any more than it is reducible to the experiences of this or that individual. When one thinks, and most of all when one thinks philosophically, the human spirit transcends its spatiotemporal particularity and allows universal thought to unfold *itself* and thereby disclose the structure of both nature and spirit as the concrete manifestation of reason. Thinking thus rids itself of the particularity of the individual standpoint, precisely in the act of a subjective, individual thought-process.

Thought is not all that defines the human spirit, and Hegel is just as committed to understanding the practical activity of spiritual life as he is to understanding the theoretical activity of the mind. As we have seen, by making the rationality of the world explicit in its thinking activity, the human is *free*. But, importantly, for Hegel, what human beings *do* can be understood as free precisely because human beings *think*. As he remarks, 'Without thought there can be no will'.[133] Thought, in other words, makes ethical life possible. For it is only in thinking about what is universally right—and not basing one's actions on 'subjective or selfish interests'[134]—that one is *morally* free and *blissful*. Because such a state of existence can only be achieved among others, the philosophy of subjective spirit gives way to the philosophy of objective spirit, in which Hegel seeks to clarify the fundamental features of the ethical and social life of the human being. There is, then, much more to say about what spirit is, for Hegel. But we know that, whatever spirit turns out to be, it will necessarily involve thinking, self-determining subjectivity.

### From Nature to Spirit: Continuity and Negation

It should be clear from the preceding that Hegel's conception of spirit has nothing in common with a 'spiritualism' that posits the existence of immaterial, spiritual entities populating a 'spirit-world'. There is no spirit-world in Hegel's system, because there is just one world: the world of nature in which spiritual activity determines itself as non-natural freedom. As Angelica Nuzzo writes, 'spirit's liberation *from* nature is more precisely its liberation *within* (and *with*) nature.'[135] Yet some commentators, in my view, have taken Hegel's anti-spiritualism too far and interpreted it as a form of non-reductive *naturalism*, as if Hegel's 'one world metaphysics' were logically consistent with and useful for contemporary work in naturalist philosophy.[136] As I see it, whatever the merits this naturalist reading of Hegel has for those already committed to a naturalist worldview, it obscures Hegel's actual thought. Hegel is an unapologetic proponent of the idea that 'spirit is not a natural being and is rather the opposite of nature.'[137] As paradoxical as it may seem at first, spirit must be *different*

from nature if it is to be fully at home in and, in the end, unopposed to nature. Reading Hegel as a naturalist prevents us from interpreting spirit—the highest and most important determination of Hegel's system—as ontologically distinct from nature. And this means that we will fail to grasp how spirit finds itself *in* nature.

But how is spirit, for Hegel, neither other-worldly nor a natural reality? By what means does Hegel circumvent this opposition between supernaturalism and naturalism? As I see it, Hegel proposes a distinctive conception of spirit by (i) noting the similarities between the 'supernaturalist' and 'naturalist' standpoint, both of which effectively *reduce* spirit to nature; (ii) insisting upon the difference between nature and spirit; and (iii) explaining that difference in a manner that demonstrates the continuity between nature and spirit. For Hegel, a conception of spirit as truly *non-natural* will not, in fact, be a *super*-natural spirit but rather a spirit that is at home with itself *in* nature. To conceive of spirit as some obscure 'stuff' lying above and beyond—or even an ethereal substance here *within* nature—is to implicitly understand spirit as simply *another* spatially extended, material being. This kind of 'transcendent' spirit lacks the very inwardness that Hegel claims defines spiritual existence, since this spirit 'above and beyond', in a 'place' all its own, would be subject to the same ontological tensions that motivated the logical progression of nature's self-external being (with the dialectic of place, matter-in-motion, etc.). For Hegel, spirit is an essentially non-localisable being; it is 'inner' insofar as it cannot be found *here* or *there*, but constitutes an ontological presence that is fundamentally non-spatial. Thus, spirit is properly differentiated from nature only when we let go of our conception of spirit as in *any* sense 'natural', as spatially extended, or as occupying a specific place.[138] Conceiving of spirit as the negation of nature—conceiving of spirit as *not* nature—therefore allows Hegel to identify spirit as absolutely *immanent*, as an activity at work *within*, but different from, the spatiotemporal world. Central to Hegel's conception of spirit, therefore, is a logic whereby spirit proves to be immanent to nature through its ontological difference from nature. I conclude this chapter with some reflections on this identity and difference between nature and spirit.

As we have seen, spirit is not a disembodied 'thing' for Hegel. Spiritual activity—including thought—manifests itself in particular, embodied individuals and the communities they comprise. But thought is not an embodied thing either, because spirit is not a *thing* at all. Indeed, according to Hegel, it is the understanding of spirit as *res cogitans* that signals the fundamental confusion of pre-Kantian rationalism regarding the nature-spirit relation. In its most straightforward form, this rationalist conception of spirit leads to Cartesian dualism, in which nature and spirit are understood to be substantial things of fundamentally different orders.

Hegel does not object to Descartes's insistence upon the *difference* between thought and extension, but rather to his conception of nature and spirit as substances. For it is this conception of nature and spirit as substantial in themselves that necessitates their utter disunity.[139] The Spinozist solution doesn't fare any better, since interpreting nature and spirit as attributes of the *same* thing or substance equally fails to demonstrate their unity—and for a similar reason. According to Hegel, Spinoza also conceives of spirit as substantial—not, to be sure, as substantial in itself, but as an attribute *of* substance, a substance that lacks the character of self-relating negativity, which would allow spirit, in a properly dialectical logic, to distinguish itself *from* nature, to *emerge* from nature as ontologically distinct. Consequently, Spinoza leaves us with a parallelism in which the relation between nature and spirit is one of an improperly differentiated identity. And, on Hegel's account, this substantial identity between nature and spirit means nature and spirit are not properly *identical* in Spinoza, as the real identity of nature and spirit can only be justified on the basis of grasping their difference (i.e., through the immanent negation of nature).[140]

Whether one follows Descartes or Spinoza, then, the same difficulty prevails: the impossibility of uncovering the necessary, logical connection between the ontologically distinct spheres of nature and spirit. As we have seen, Hegel understands this difference to be achieved, in some sense, *by spirit*, namely, as its self-liberation from nature. By *negating* nature's self-external being—and, more precisely, by *being* this activity—spirit proves that it is neither substantial nor an attribute of substance. This is why Hegel's critique of Spinoza always turns on the absence in Spinoza's philosophy of a self-determining form of freedom that realises the ontological transition from sheer substance to subjectivity. 'Against Spinozism', Hegel remarks, 'spirit … has emerged from substance.'[141] The crucial step beyond pre-Kantian rationalism, then, is not only the Kantian conception of subjectivity as pure activity, but the Hegelian notion that this subjectivity is an *achievement* articulated in the processual movement *from* substance *to* subjectivity.[142]

Hegel has been championed by a number of contemporary philosophers for this understanding of spirit as 'achievement', but much of this work either ignores or outright rejects the idea that the liberation of spirit is an *ontological* achievement, i.e., that Hegel is trying to make sense of the *ahistorical* emergence of a non-natural way of *being*. Pippin, for example, interprets the Hegelian idea of the 'achievement' of spirit to be *antithetical* to the idea that spirit is a 'new ontological type'.[143] And Pippin's reading of Hegel is not alone in this regard. From the naturalist perspective, McDowell and Pinkard have both argued that spirit is a 'second nature' achieved through a process of *Bildung*, where 'second nature' doesn't only signify a new, acquired way of being, but also a continuation of *nature*

in the more restricted sense.[144] As Sebastian Gardner puts it, what these latter, naturalist interpretations of idealism propose is that:

> we should think … not that our normativity emerges out of nature in a 'metaphysical' manner, on the basis of any ontological grounds, but that it comes forth as a historical, normative-developmental achievement—this achievement being, again, no alteration in the ontological fabric of the universe, but a matter internal to our thinking.[145]

It is interesting that this aspect of the naturalist interpretation is shared with Pippin's anti-naturalist reading; in both cases, spirit's self-liberating activity is understood to be fundamentally historical and not ontological or metaphysical.

The reading of Hegel I am proposing here puts things the other way around. As I see it, the liberation of spirit is, first and foremost, an *ontological* achievement that *does not correspond to a historical event* but is rather the condition for the possibility of any history whatsoever, insofar as 'history' signifies the history of human freedom. For Hegel, spirit *just is* its active liberation from nature—that is a point about the *structure* of spirit's being. *Bildung*—which is indeed central to a human individual's *realising* its spiritual character—should therefore be understood as a historical or empirical manifestation *of* that more basic ontological achievement. In other words, the historical processes that allow a person to be the spiritual being that she is are only possible if that person is the *kind of being* that is *not natural*, not essentially of the natural world. *Pace* McDowell, then, I understand Hegelian spirit to very much be animated by its 'non-animal constitution'. Indeed, on my view, Hegel's system contains far more than a mere 'whiff' of the idea that 'we [have] a foothold outside the animal kingdom'—although this 'outside' need not be understood as a 'splendidly non-*human* realm of ideality' so long as we understand the *human individual* as essentially *spiritual*, as opposed to natural, in her contemplation of *reason*.[146]

I think we can explain the tendency in contemporary Anglophone Hegel scholarship to downplay the metaphysical distinctness of spirit by focusing on a more general lack of concern with the philosophy of nature—specifically understood as something along the lines of Schellingian, speculative physics. As I noted in Chapter 4, Pippin claims that Hegel's philosophical aims depart drastically from the nature-philosophical aims of his idealist predecessor, and that, although Hegel's system does include a philosophy of nature, it 'seems to turn no other wheel elsewhere in what Hegel says, and very little in the *Philosophy of Spirit* seems to depend on it'.[147] McDowell's commitment to naturalism might suggest that he would be more interested in the philosophy of nature. But in McDowell, we don't

get anything like a story about how nature makes possible (let alone necessary) 'second nature'. Instead, McDowell simply begins with animals capable of responding to and acting on reasons, i.e., he begins with 'second nature' (where 'second nature' might as well be 'acquired essence', nothing tying this form of life to nature *as such*). Pinkard goes further in developing a naturalist interpretation of Hegel—and this is not unrelated, I take it, to his acknowledgment of Hegel's debt to Schellingian philosophy of nature.[148] But Pinkard describes Hegel's philosophy of nature as 'an interpretive and evaluative look at [empirical] science's study of nature'.[149] On this reading, the philosophy of nature, while having metaphysical implications, is explicitly concerned with *ways of understanding* nature or *explaining* natural phenomena.[150] Reflecting on our conceptions of nature and our conceptions of our own mindedness allows us to become 'natural creatures [that] make ourselves distinct from nature'.[151] Pippin thus goes on to consider the practical and theoretical activity of human and non-human animals, with the aim of clarifying how it is that spirit distinguishes itself as spirit (while remaining 'natural').

In all of these cases, a downplaying of Hegel's ontology of non-human nature prevents the *difference* between nature and spirit—and, perhaps more importantly, the reason for this difference—from coming to light. By contrast, once we take the philosophy of nature seriously as an investigation into the *being* or *rational structure of nature*—a structure that is more basic to *what is* than either *our* nature as animals or *our understanding* of nature writ large—it becomes difficult to conceive of 'spirit' as anything but a new and non-natural type of being. Why? First of all, because we discover in the philosophy of nature that spirit—i.e., explicitly rational, self-determining existence—is something that nature implicitly *aims to realise* yet perpetually *fails to be* insofar as it is *nature*. And second, because beginning with the philosophy of nature allows us to see that spirit's self-liberating activity is not a historical achievement, since nothing unfolds historically in nature's rational development; each stage of nature—and ultimately spirit itself—proves to be more explicitly free than the preceding stages, but this development does not take place in time. The achievement of spirit's liberation from nature, read from the perspective of the philosophy of nature, is an ontological achievement, a moment, within the system of being, in which explicitly rational, self-determining creatures prove to exist.

Although we human beings certainly have bodies, and although we are indeed organisms, our *being*—what we are essentially—is different in kind from everything in the natural world. But to bring this out of Hegel's thought, one cannot begin with the human mind or the human animal's practical activity in the world; to allow the difference between nature and spirit to come to light, one must begin with *reason itself*, which is *real*, first

and foremost, as *nature*. In other words, one must leave behind the image of Hegel as a philosopher who makes practical reason, or human freedom, fundamental. One must be open to the possibility that central to Hegel's philosophical project is a metaphysics of nature—a metaphysics that will undoubtedly appear dogmatic to both Kantian and neo-pragmatist readers of Hegel. But that is what Hegel is doing, and in this respect—despite the fact that he conceives of spiritual activity as an achievement, as opposed to a 'thing' of the world—Hegel is in fact closer to the early modern rationalists than is ordinarily acknowledged. To be sure, the earlier rationalists confusedly understand spirit in terms of substance; but the problem with this, again, is that it fails to make sense of how spirit—a distinctively non-natural ontological activity—emerges from nature.

With these remarks, it becomes apparent that 'spirit's self-liberation from nature' and 'the achievement of spiritual freedom' are misleading phrases, since they imply that we can explain the existence of spirit without any reference to nature. While the formal or essential being of spirit is distinctive and requires a separate, non-nature-philosophical treatment, there is also a way in which grasping this fact requires that we have first understood the way nature makes possible and necessary human existence. The achievement *that spirit is* is, in fact, an achievement of reason, or being itself. And it is an achievement that would not be realised without nature. This is not to make the more obvious point that we couldn't *do* anything or *understand* anything without existing in a natural world. It is the far more provocative idea that the inner, logical structure of nature explains, in an important sense, why human beings exist at all. Were nature not, at bottom, self-external being, then there is no way—on Hegel's view—to account for the existence of a very different kind of being.

Because Hegel derives the necessity of spiritual freedom from the being of nature, one would be confused to take the ontological difference between nature and spirit as a sign that there is something inexplicable—from the perspective of the philosophy of nature—about the nature-spirit difference. On the contrary, since spirit is logically derivable from nature, the difference between nature and spirit is entirely explicable. (This is the case even if, as with so much of Hegel's system, it is difficult for *us* to follow; there is at least *supposed* to be no irrational gap here.) Because there is a rational explanation for spirit's emergence, the difference between nature and spirit also involves ontological continuity; we move from nature to spirit immanently, and in so doing realise that they are not the same kind of being, that there is, indeed, a kind of rupture in reality. To understand how Hegel can see the nature-spirit relation as one of both ontological continuity and difference, it is helpful to consider his views about these concepts as they apply to the structure of nature.

According to Hegel, nature is stratified because it is a dirempt existence, a self-external being that necessitates not only that it be spatially extended but that its various inorganic and organic forms remain in important ways separate from one another. Were nature not shot through with negativity, it would be incapable of generating the kind of qualitative difference that is at work throughout nature's development, and the system of nature would consequently be one of sheer quantitative difference. We should note that this idea is central to Hegel's dismissal of historical evolution as both a theory of speciation and, more importantly, as a conception of nature's total development. For Hegel, differentiation *without* negation leads to differences of mere degree, and it is entirely misguided to conceive of the variety of organic species—to say nothing about the differences between inorganic and organic nature—as different with respect to quantity alone. Thus, Hegel claims that 'the old saying, or so-called law, *non datur saltus in natura*, is altogether inadequate to the diremption of the concept', that is, to nature, the concept's primary manifestation.[152] Nature 'advances by leaps',[153] according to Hegel, because nature is self-determining reason cast asunder, hence the stratified character of nature's rational structure. And yet these leaps throughout nature do not render it an *utterly* dirempt existence. On the contrary, nature's qualitative 'leaps' are made possible by the intrinsic, rational structure *of* nature *as* negative. Nature 'makes leaps', then, because this is what it means to be a rationally structured *system* of self-external being. And with the transition from nature to spirit, one enormous leap is made: from self-external being to non-natural being. Importantly, this 'leap' is made *necessary*; it is neither inexplicable nor an accidental fact but is, rather, required by nature's intrinsic (logical) movement. There is, then, both difference and continuity here. As William Wallace succinctly puts it with regard to Hegel's system as a whole: 'all development is by breaks, and yet makes for continuity.'[154] Dialectical explanation doesn't reduce or close the gap between different kinds of beings; it shows us that different kinds of beings are what they are because of the movement of negativity.

To hold these two thoughts together, that nature and spirit are continuous with one another and yet distinct, is central to Hegel's conception of the nature-spirit relationship. As Sedgwick has argued, 'dualism (of some kind) is alive and well in his theory of identity'.[155] It is therefore curious that interpreters of Hegel, such as deVries, claim that Hegel is a 'great naturalist … one who saw man as arising out of and continuous with nature and capable of being understood only in this natural context' and that 'no ultimate break is to be found between nature and spirit in Hegel's system.'[156] As I have argued, there is indeed continuity between the natural and the spiritual; but attending to what kind of continuity this *is*—attending to the details of this continuity—reveals that, for Hegel, nature

and spirit are also importantly *different*, that there is a 'break' between the two. If there weren't a 'break' of any kind for Hegel—if spirit were only *more* rational and *more* free than nature, but not in any way *other* than nature—then Hegel would be operating with the very conception of difference against which he fought at every turn: mere quantitative difference, difference without determinacy because it is without negation.

To conclude these chapters on Hegel, then, it might be helpful to recall that Schelling too conceives of nature and spirit as both identical (or continuous with one another) and different. Certainly, from a Hegelian perspective, Schelling's refusal to conceive of nature's development in terms of self-negating negation, his adherence to the Leibnizian notion that there are no leaps in nature,[157] and his utilisation of concepts (such as 'potency') taken over from mathematics prevent him from ever properly differentiating spirit from nature. But Hegel recognised that such differentiation was indeed Schelling's aim. The absolute idealist programme, initiated by Schelling and pushed in an explicitly logical direction by Hegel, was to present the manner in which the unique character of spiritual existence is made necessary by nature. As Schelling and Hegel saw it, this was the only way one could legitimately defend the Kantian subject, as the crowning achievement of nature's non-conscious, rational, ahistorical evolution.

## Notes

1 *W* 9: § 277, 121; *Philosophy of Nature*, p. 95.
2 *W* 2: 188–207; 'How the Ordinary Human Understanding Takes Philosophy', pp. 292–310.
3 *W* 9: § 326, 288; *Philosophy of Nature*, p. 233. For the processes of combination, see §§ 330–333; for the process of separation or dissociation, see § 334.
4 *W* 9: Addition to § 336, 334; *Philosophy of Nature*, p. 270.
5 *W* 9: Remark to § 334, 328–329; *Philosophy of Nature*, p. 265.
6 *W* 9: Addition to § 336, 334–335; *Philosophy of Nature*, p. 270.
7 *W* 9: Remark to § 334, 328–329; *Philosophy of Nature*, p. 265.
8 The logic here is closely related to the more abstract dialectic of infinity in the *Logic*. The true infinite, for Hegel, is not infinite insofar as it goes on *ad infinitum* (a version of the 'bad infinite'), but is infinite in its self-perpetuation through its own finite moments. Cf. *W* 5: 163; *Science of Logic* (Miller), p. 148.
9 *W* 9: Addition to § 335, 333; *Philosophy of Nature*, p. 269. Emphasis modified.
10 According to Hegel:

> The solar system was the first organism; but it was only implicitly (*an sich*) organic, not yet an organic existence. These giant members are independent shapes, and the ideality of their independence is merely their motion; they form only a mechanical organism.
>
> (*W* 9: Addition to § 337, 339; *Philosophy of Nature*, p. 275)

11 *W* 9: § 336, 334; *Philosophy of Nature*, p. 270. Emphasis modified.
12 *W* 9: Addition to § 335, 334; *Philosophy of Nature*, p. 270. Translation and emphasis modified.
13 *W* 9: Addition to § 335, 334; *Philosophy of Nature*, p. 270.
14 *W* 9: § 338, 342; *Philosophy of Nature*, p. 277.
15 *W* 9: Addition to § 337, 340; *Philosophy of Nature*, p. 275.
16 There is also a logical connection, according to Hegel, between the elliptical path traversed by the planets and the curved lines expressed throughout the body of the organism. These are the most concrete and organic geometrical expressions of rationality. See *W* 9: Addition to § 310, 200–201; *Philosophy of Nature*, pp. 161–162.
17 *W* 9: Addition to § 270, 104; p. 81. See also the Addition to § 275:

> Piety wants to populate the Sun and Moon with men, animals and plants, but only a planet can rise to this. Natures which have withdrawn into themselves, such concrete forms as preserve independence in face of the universal, are not yet to be found in the Sun.
>
> (*W* 9: 114–115; *Philosophy of Nature*, p. 90)

18 *W* 9: Addition to § 337, 338–339; *Philosophy of Nature*, p. 274.
19 *W* 9: Addition to § 337, 339; *Philosophy of Nature*, p. 275. Hegel explicitly draws upon Kant here in conceiving of the organism as 'an end for itself'. *W* 9: Addition to § 337, 339; *Philosophy of Nature*, p. 275. See also Hegel's remark on Kant's revival of Aristotelian teleology with respect to the animal organism. *W* 9: Remark to § 360, 473; pp. 388–389.
20 As Dietrich von Engelhardt remarks, this does not mean that 'the laws of physics and chemistry are … disproved by this transition into biology, they are simply complemented by new and more complex principles; the final cause is added to the efficient cause.' Dietrich von Engelhardt, 'Hegel on Chemistry and the Organic Sciences' in *Hegel and Newtonianism*, p. 661.
21 It is worth noting here that mechanism is still at play in nature in a significant sense. As Hegel says in his discussion of 'shape' in general (in the 'physics'), shape is, first and foremost, *mechanistic*, since shape concerns strictly quantitative, spatial relations. However, Hegel goes on: in shape, 'form manifests itself *through its own activity*, and does not show itself merely as a characteristic mode of *resistance* to *outside* force.' *W* 9: § 310, 199; *Philosophy of Nature*, p. 160. The contrast described here is, I take it, one between a qualitatively distinct particular with a quantitative shape *of its own* (i.e., 'physical' shape) and the quantitative determinacy that results from collision. In the latter case, a material body allows itself to become 'quantitatively' differentiated in its change of velocity, but it allows itself to become differentiated in this manner entirely *from without*. In the physics, by contrast, something's particular shape is determined, in part, from within. In the organics, the logical-natural determination of shape is raised to an even higher and therefore ontologically distinct level, because now shape—here the shape of the earth—is *fully* self-determining in that it is only the shape that it is through a process of transformation. In other words, it is only through its perpetual and autonomous development of

shape that the earth is the being that it is. Moreover, the self-development of the earth's shape involves the magnetic, electrical, and chemical processes that have been sublated in organic life, making the 'shape' of the earth one that involves qualitative determinacy and not mere quantitative particularity.

22 *W* 9: Addition to § 341, 363; *Philosophy of Nature*, p. 296.

23 In the Addition to § 354, which considers in detail the nervous, circulatory, and digestive systems of the animal organism, Hegel inverts this metaphor by conceiving of the liver in terms of volcanic activity. *W* 9: Addition to § 354, 449; *Philosophy of Nature*, p. 368. Again, the point is not that organic processes should be understood in terms of geology (or vice versa), but that there is an ontological proximity between the inorganic and organic, a proximity that comes to its most ambivalent expression—that is, *ontologically* ambivalent expression—in the self-determination of the earth, a midway point between inorganic and organic nature.

24 *W* 9: Addition to § 343, 372; *Philosophy of Nature*, p. 303. Translation modified.

25 *W* 9: Addition to § 337, 340; *Philosophy of Nature*, pp. 275–276. Emphasis modified.

26 *W* 9: Addition to § 337, 340; *Philosophy of Nature*, p. 276.

27 *W* 9: § 341, 360; *Philosophy of Nature*, p. 293. Hegel's conception of the earth's self-organisation echoes his conception of the crystallisation process, the latter of which can appear as a 'dumb life [*stummes Leben*].' *W* 9: Addition to § 310, 200; *Philosophy of Nature*, p. 161.

28 *W* 9: Addition to § 341, 361; *Philosophy of Nature*, p. 294. See also Remark to § 369 (§ 368 in Michelet's edition which Miller retains): 'The fecundity of the Earth causes life to break forth *everywhere* and in every way' (*W* 9: 502; *Philosophy of Nature*, p. 416).

29 *W* 9: § 342, 367; *Philosophy of Nature*, p. 299.

30 *W* 9: § 337, 337; *Philosophy of Nature*, p. 273.

31 *W* 9: § 344, 373–374; *Philosophy of Nature*, p. 305.

32 *W* 9: Addition to § 344, 375; *Philosophy of Nature*, pp. 306. See also Addition to § 347, 412; *Philosophy of Nature*, p. 337.

33 *W* 9: Addition to § 347, 413; *Philosophy of Nature*, p. 338.

34 *W* 9: Addition to § 344, 375; *Philosophy of Nature*, p. 306.

35 According to Hegel:

> The process with the air, therefore, must certainly not be represented as an appropriation by the plant of something already formed which it increases only mechanically. Such a mechanical representation is altogether to be rejected; what occurs is a complete transformation [*vollkommene Verwandlung*], an operation [*Fertigmachen*] accomplished by the majesty of the living organism, for organic life is just this power over the inorganic to transform it.
>
> (*W* 9: Addition to § 347, 416; *Philosophy of Nature*, p. 339)

36 Cf. Schelling, *SW* I/6: 393; *System* (Second Part), p. 99: 'If the plant merely followed its drive, it would grow all the way up to the sun' to 'establish … identity'.

37 Hegel makes the connection between free fall, light, and plant life explicit in the Addition to § 344:

> The plant has an essential, infinite relationship with light; but at first it is a quest for this its self, like heavy matter. This simple principle of selfhood which is outside of the plant is the supreme power over it.
>
> (W 9: 373; *Philosophy of Nature*, p. 306)

38 *W* 9: Addition to § 344, 377; *Philosophy of Nature*, p. 308.
39 *W* 9: Addition to § 344, 377; *Philosophy of Nature*, p. 308.
40 *W* 9: § 347, 412; *Philosophy of Nature*, p. 336. Emphasis modified.
41 *W* 9: Addition to § 345, 385; *Philosophy of Nature*, p. 314.
42 'The difference of the organic parts is only a superficial metamorphosis and one part can easily assume the function of the other.' *W* 9: § 343, 371; *Philosophy of Nature*, p. 303. As Goethe remarks, 'certain external parts of the plant undergo frequent change and take on the shape of the adjacent parts—sometimes fully, sometimes more, and sometimes less.' Goethe, *Metamorphosis of Plants*, trans. Douglas Miller and ed. Gordon L. Miller (Cambridge, MA: MIT Press, 2009), p. 5.
43 *W* 9: Addition to § 346, 403; *Philosophy of Nature*, p. 329. In Miller's translation, as in Michelet's edition, this addition is found in § 346a, so that the two additions to § 346 are split between § 346 and § 346a.
44 *W* 9: Addition to § 345, 385; *Philosophy of Nature*, p. 314.
45 *W* 9: Addition to § 344, 374; *Philosophy of Nature*, p. 306.
46 *W* 9: § 343, 371; *Philosophy of Nature*, p. 303.
47 Michael Marder, *The Philosopher's Plant: An Intellectual Herbarium* (New York: Columbia University Press, 2014), pp. 160–161. In recent years, Hegel's 'dialectical botany', as Marder calls it (p. 158), has come under heavy criticism for its apparent disparagement of non-animal forms of life. Cf. Marder, *The Philosopher's Plant*; Marder, *Plant-Thinking: A Philosophy of Vegetal Life* (New York: Columbia University Press, 2013); and Elaine P. Miller, *The Vegetative Soul*. Although I do not have the space to offer a robust defence of Hegel's hierarchical account of life here, part of my aim in clarifying his account is to suggest that it secures not only the ontological and axiological continuity between plant and animal life but also their difference. If we refuse the ontological and axiological superiority of the animal, I take it, we are likely to also find it difficult to see the substantive difference between these forms of life. To put it otherwise, I think Hegel is right to say that the difference between plant and animal falls apart if we take that difference to be non-hierarchical.
48 *W* 9: Addition to § 347, 419; *Philosophy of Nature*, p. 342.
49 *W* 9: Addition to § 347, 419; *Philosophy of Nature*, p. 342. See also § 348, p. 419; *Philosophy of Nature*, pp. 342–343.
50 *W* 9: Addition to § 348, 423; *Philosophy of Nature*, pp. 345–346.
51 Beiser, *The Romantic Imperative: The Concept of Early German Romanticism* (Cambridge, MA: Harvard University Press, 2003), pp. 162, 168–170.
52 See, for example, *W* 9: Addition to § 346, 402; *Philosophy of Nature*, p. 328.

53 *W* 9: § 363 and the Addition, 479–480; *Philosophy of Nature*, pp. 393–394. See also the Addition to § 364, which contains a discussion of how the animal's digestive process is wrongly understood as a mechanical or chemical process, but must rather be understood in terms of the teleological activity of the organism. *W* 9: 483–494; *Philosophy of Nature*, pp. 397–406.
54 *W* 9: Addition 1 to § 357, 464; *Philosophy of Nature*, p. 381.
55 'The plant is a subordinate organism whose destiny is to sacrifice itself to the higher organism and to be consumed by it.' Addition to § 349, 429; *Philosophy of Nature*, p. 350.
56 *W* 9: § 351, 432; *Philosophy of Nature*, p. 353.
57 Pinkard, *Hegel's Naturalism*, p. 24.
58 As Hegel says, the animal soul is 'finer than a point', the first negation of space. *W* 9: Addition to § 350, 431; *Philosophy of Nature*, p. 352.
59 *W* 9: Addition to § 251, 37; *Philosophy of Nature*, p. 25.
60 *W* 9: Addition to § 351, 433; *Philosophy of Nature*, p. 354.
61 I therefore disagree with Furlotte's claim that 'nature's inwardness … must be a fight for achievement, not a guarantee in advance'. Furlotte, *The Problem of Nature in Hegel's Final System*, p. 24. That a struggle takes place does not require that the outcome of that struggle be contingent.
62 *W* 9: Addition to § 359, 472; *Philosophy of Nature*, p. 387.
63 *W* 9: § 359, 468; *Philosophy of Nature*, pp. 384–385.
64 *W* 9: Remark to § 359, 469; *Philosophy of Nature*, p. 385. See also the Addition to § 359, 472; *Philosophy of Nature*, pp. 387–388.
65 *W* 9: § 351, 431; *Philosophy of Nature*, p. 352.
66 *W* 9: Addition to § 362, 476; *Philosophy of Nature*, p. 391.
67 *W* 9: Addition to § 351, 433–434; *Philosophy of Nature*, p. 354.
68 *W* 9: § 355 and the Addition, 455, 459; *Philosophy of Nature*, pp. 373, 376–377.
69 *W* 9: § 369, 516; *Philosophy of Nature*, p. 411 (§ 368 in Michelet's edition and Miller's translation).
70 *W* 9: Addition to § 369, 517; *Philosophy of Nature*, p. 412 (§ 368 in Michelet's edition and Miller's translation). That animal life is necessarily sexually differentiated is central to this argument of Hegel's. For an account of Beauvoir's reception and feminist critique of this logic of sexual difference, see Shannon M. Mussett, 'Life and Sexual Difference in Hegel and Beauvoir', *The Journal of Speculative Philosophy* 31.3 (2017), pp. 396–408. See also Alison Stone, 'Sexual Polarity in Schelling and Hegel' in *Reproduction, Race, and Gender in Philosophy and the Early Life Sciences*, ed. Susanne Lettow (Albany: State University of New York, 2014), pp. 259–281 and Yuka Okazaki, 'Challenging the Sex Binary in Hegel's Philosophy', *Revista Estudos Hegelianos* 19.33 (2022), pp. 197–218.
71 *W* 9: Addition to § 369, 517; *Philosophy of Nature*, p. 412 (§ 368 in Michelet's edition and Miller's translation).
72 *W* 9: Addition to § 350, 431; *Philosophy of Nature*, p. 352. See also the Addition to § 351, 433; *Philosophy of Nature*, p. 354.
73 *W* 9: § 362, 475; *Philosophy of Nature*, pp. 390–391.

74 *W* 9: Addition to § 248, 29; *Philosophy of Nature*, p. 18.
75 *W* 9: Addition to § 351, 432–433; *Philosophy of Nature*, p. 354.
76 *W* 9: Addition to § 369, 502; *Philosophy of Nature*, p. 417 (Addition to § 368 in Michelet's edition and Miller's translation).
77 *W* 9: Remark to § 358, 466; *Philosophy of Nature*, p. 383.
78 According to Hegel:

> Nothing in the organism endures, but everything is reproduced, not excepting the bones … It is said that after five, ten, or twenty years the organism no longer contains its former substance, everything material has been consumed, and only the substantial form persists.
>
> (*W* 9: Addition to § 356, 460–461; *Philosophy of Nature*, p. 378)

We can see in this active reproduction of form the movement from substance to subjectivity.

79 There is undoubtedly a problem in Hegel's account of the finitude of life in that he conceives of life almost exclusively from the perspective of the male animal and can therefore identify death as the stage which, logically speaking, immediately follows copulation, since the male animal is no longer required to bring the new individual into existence. Hegel's account of organic finitude therefore tends to ignore the logics of incubation and gestation and their role in the more general logic of the genus process.
80 *W* 9: Addition to § 370, 519–520; *Philosophy of Nature*, p. 414 (Addition to § 369 in Michelet's edition and Miller's translation).
81 *W* 9: § 370, 519; *Philosophy of Nature*, p. 414 (§ 369 in Michelet's edition and Miller's translation).
82 Hegel's attention to the ontological necessity of disease and death at the end of the philosophy of nature drives home the idea that organic life is utterly dependent upon the inorganic from which it emerges, so much so that, at any moment, a particular life can be reduced to sheer chemical processes. As Engelhardt writes, 'In disease, the organism is overpowered by inorganic nature.' Engelhardt, 'Hegel on Chemistry and the Organic Sciences', p. 662. This is a central feature of many stages of Hegel's system: an instance of a higher stage can lose its determinacy and sink back into a more basic stage. Life can become diseased and lead to the death of the organism; thought can become deranged and allow the more basic forms of anthropological existence, such as madness, to take over the mind; a form of political life can degenerate into something more basic and less expressive of human freedom. And although individual cases of such degeneration are always contingent with respect to their particular circumstances, it is logically *necessary* that this always remain a possibility for each and every instance of life, mind, political institution, etc.
83 *W* 9: Addition to § 374, 534–535; *Philosophy of Nature*, p. 441.
84 Hegel can be understood as occupying a relatively moderate position on this issue. He does not go so far as to say, like Freud, that life *seeks* death (Sigmund Freud, *Beyond the Pleasure Principle*, trans. James Strachey [New York and London: W.W. Norton and Company, 1961], p. 46), nor does he argue, like Bergson does, that deterioration and death have nothing to do with the essence of life, which is strictly creative (Henri Bergson, *Creative Evolution*, trans.

Arthur Mitchell [New York: Cosimo, 2005], p. 23). Following Aristotle (*De Anima* II.2), Hegel understands decay and death to be a distinctive capacity *of life*, but not something after which a living thing strives.

85 *W* 9: Addition to § 370, 520; *Philosophy of Nature*, p. 414 (Addition to § 369 in Miller's translation).

86 *W* 9: Addition to § 370, 520; *Philosophy of Nature*, p. 414 (Addition to § 369 in Michelet's edition and Miller's translation).

87 *W* 9: Addition to § 376, 538; *Philosophy of Nature*, p. 444.

88 *Lectures on the Philosophy of Religion: Volume II*, p. 743. Emphasis modified.

89 *Lectures on the Philosophy of Religion: Volume II*, p. 453n.

90 It also follows from this that nature is not cancelled entirely in the transition from nature to spirit. As Allegra de Laurentiis puts it, 'The Idea never discards its own physicality. Inwardness is just the other mode of existence of the Idea that nonetheless continues to lead an exterior existence.' Allegra de Laurentiis, *Hegel's Anthropology: Life, Psyche, and Second Nature* (Evanston: Northwestern University Press, 2021), pp. 47–48.

91 *W* 10: Addition to § 381, 21; *Philosophy of Mind*, p. 11.

92 *W* 10: § 382, 25; *Philosophy of Mind*, p. 15. Emphasis modified.

93 *W* 10: § 381 and § 382, 17, 25; *Philosophy of Mind*, pp. 8, 15.

94 *W* 9: Addition to § 352, 436; *Philosophy of Nature*, p. 357.

95 *W* 10: § 377, 9; *Philosophy of Mind*, p. 1. Translation modified.

96 That spirit is, on the one hand, an inward, self-identical 'unity', and on the other, a complex, internally differentiated process, is precisely why spirit is ontologically higher than the selfsame reality of 'light'. Spirit is differentiated from itself *in* its internal unity and simple nature, unlike light, which is utterly undifferentiated. See Chapter 6 above. As Hegel puts it:

> Spirit is not merely this abstractly simple being equivalent to light … Spirit in spite of its simplicity is distinguished from itself; for the 'I' sets itself over against itself, makes itself its own object and returns from this difference.
>
> (*W* 10: Addition to § 381, 21; *Philosophy of Mind*, p. 11, translation modified)

97 Murray Greene, *Hegel on the Soul: A Speculative Anthropology* (Dordrecht: Springer, 1972), pp. 48–49, 170; and Greene, 'Hegel's Conception of Psychology' in *Hegel and the Sciences*, p. 189. Note also that this 'liberation struggle' does not have the significance, first and foremost, of historical *Bildung*. As Greene rightly emphasises, despite the philosophical significance of *Bildung* for Hegel, 'in philosophical science, Spirit is viewed in its self-formation according to the necessity of its *notion* as Spirit.' *Hegel on the Soul*, p. 52. Emphasis modified. See *W* 10: Addition to § 382, 27; *Philosophy of Mind*, p. 16.

98 One might think that 'reason' (§§ 438–439), the last stage of the *Encyclopaedia* phenomenology, is where spirit determines itself *as spirit*, since it is with reason that we transition into psychology, the domain of spiritual activity in which consciousness has realised that the world is in fact rational. However, at this stage, the 'I' only knows that the world *must* be rational; it hasn't yet

confirmed that this is in fact the case. It is only through the psychological dialectic that the intelligence *proves* its knowledge of the world's rationality, and it does so with completeness (at least regarding its everday theoretical relationship to the world) in thought.

99 *W* 10: Addition to § 387, 40; *Philosophy of Mind*, p. 27.

100 *W* 10: Addition to § 381, 25; *Philosophy of Mind*, p. 14.

101 *W* 10: § 380, 16–17; *Philosophy of Mind*, p. 7. Translation modified.

102 Space and time are exceptions here, since they are the forms through which more concrete natural entities and processes become manifest—and therefore space and time do not exist independently of natural phenomena.

103 *W* 10: § 380, 17; *Philosophy of Mind*, p. 7.

104 *W* 10: Addition to § 401, 113; *Philosophy of Mind*, p. 85.

105 *W* 10: Addition to § 381, 21; *Philosophy of Mind*, p. 11.

106 'Habit is the mechanism of self-feeling, as memory is the mechanism of intelligence.' *W* 10: Remark to § 410, 184; *Philosophy of Mind*, p. 141. On habit, see Simon Lumsden, 'Between Nature and Spirit: Hegel's Account of Habit' in *Essays on Hegel's Philosophy of Subjective Spirit*, ed. David S. Stern (Albany: State University of New York, 2013), pp. 121–137. For an account of thought's dependence upon mechanical memory, see Houlgate, 'Hegel, Derrida, and Restricted Economy: The Case of Mechanical Memory', *Journal of the History of Philosophy* 34 (1996), pp. 79–93.

107 Houlgate, 'Hegel, Derrida, and Restricted Economy', p. 91.

108 That sensation is considered in both the organics and the anthropology signals a hermeneutic difficulty regarding the transition from nature to spirit, but I will not explore it here. Suffice it to say that the sensation experienced by the spiritual subject is distinct from its merely animal sensations insofar as 'spiritual sensations' draw the human beyond its spatiotemporal immediacy and into its *whole* life, a life beyond the present moment and into the past and future.

109 *W* 8: § 11, 55; *Encyclopaedia Logic*, p. 35.

110 This 'incorporation' also involves a process of 'externalisation', e.g., in the production of linguistic signs. *W* 10: §§ 457–459, 267–277; *Philosophy of Mind*, pp. 210–218.

111 *W* 10: Addition to § 381, 21; *Philosophy of Mind*, p. 11. Translation modified.

112 Greene, *Hegel on the Soul*, p. 51.

113 *W* 8: Addition 2 to § 19, 70; *Encyclopaedia Logic*, p. 48.

114 *W* 8: § 11, 55; *Encyclopaedia Logic*, p. 35. Emphasis modified.

115 Hegel does not hold the view that all thought is radically dissociated from the sensuous or perceptual experience upon which it is dependent. In thinking, we can attend to both pure and empirical concepts, and the latter are far more entangled with perceptual experience than are the former.

116 Houlgate has emphasised the significance of 'letting go' throughout Hegel's system. See, for example, *The Opening of Hegel's Logic*, pp. 60–63.

117 *W* 8: Addition 2 to § 23, 84; *Encyclopaedia Logic*, p. 58.

118 As Hegel puts it, in thought, spirit 'may withdraw from everything external and from its own externality, its very existence.' *W* 10: § 382, 25–26; *Philosophy of Mind*, p. 15. Emphasis modified.

119 Another way to understand this difference between nature and spirit is that nature cannot remain what it is through negation or contradiction, whereas spirit indeed can and must do this: 'What belongs to external Nature is destroyed by contradiction; if, for example, gold were given a different specific gravity from what it has, it would cease to be gold. But mind has power to preserve itself in contradiction.' *W* 10: Addition to § 382, 26–27; *Philosophy of Mind*, pp. 15–16.

120 For a very different account of Hegel's distinction between the human and the animal—an account that has convincingly shown 'plasticity' to be an implicit yet essential Hegelian concept—see Catharine Malabou, *The Future of Hegel: Plasticity, Temporality and Dialectic*, trans. Lisabeth During (London: Routledge, 2005).

121 Since human experience is permeated by thought, *human* feeling differs from the feeling of the non-human animal and can rightly be understood as putting us into contact, to some extent, with the universal.

122 *W* 10: Addition to § 381, 23; *Philosophy of Mind*, p. 13.

123 This is distinct from the imagination, for example, which acts *on* nature (or the sensuous), rather than letting nature itself divulge its intrinsic rationality.

124 *W* 8: Addition 2 to § 24, 84; *Encyclopaedia Logic*, p. 58.

125 The difference between subjective reason and thought is important in this regard. Reason, the final stage of phenomenological development, is already the identity of consciousness and its object, and thus in being rational, spirit knows that the world is rational *in principle*. It is only through the subsequent dialectic of psychology, however, that this worldly rationality is *proven*, through an active engagement—first theoretical, then practical—with the world.

126 *W* 10: § 465, 283; *Philosophy of Mind*, p. 224.

127 Whether this is fair to pre-Schellingian idealism is another question. In defence of Kant, one might note that even the thing-in-itself is not an *external* limit to knowledge, but a limit posited *in thought*. As Kant remarks, 'when [the understanding] calls an object in a relation mere phenomenon [it] simultaneously *makes for itself*, beyond this relation, another representation of an object *in itself*.' *KGS* III: 209; *Critique of Pure Reason* B306, p. 360. Emphasis modified.

128 Hegel discusses the identity of and difference between philosophical thought and thought in general in the Introduction to the *Encyclopaedia Logic*:

> To begin with, philosophy can be determined in general terms as a *thinking consideration* of objects. But if it is correct (and indeed it is), that the *human being* distinguishes itself from the *animals* by thinking, then everything human is human because it is brought about through thinking, and for that reason alone. Now, since philosophy is a peculiar mode of thinking—a mode by which thinking becomes cognition, and conceptually comprehensive cognition at that—philosophical thinking will also be *diverse*

> from the thinking that is active in everything human and brings about the very humanity of what is human, even though it is also identical with this thinking, and *in-itself* there is only *One* thinking.
>
> (*W* 8: § 2, 41–42; *Encyclopaedia Logic*, pp. 24–25)

See also *W* 10: Addition to § 406, 146–147; *Philosophy of Mind*, p. 112: 'The human mind is, of course, able to rise above the knowing which is occupied exclusively with sensibly present particulars; but the absolute elevation over them only takes place in the conceptual cognition of the eternal.'

129 *W* 9: Addition to § 376, 549; *Philosophy of Nature*, pp. 444–445.

130 *W* 9: Addition to § 361, 475; *Philosophy of Nature*, p. 390. Emphasis modified.

131 See, for instance, Herder, *Essay on the Origin of Language*, trans. Alexander Gode in *Two Essays on the Origin of Language: Jean-Jacques Rousseau and Johann Gottfried Herder*, ed. John H. Moran and Alexander Gode (Chicago: The University of Chicago Press, 1966), p. 105.

132 For Hegel's critique of Herder's philosophy of language, see Jere O'Neill Surber, 'Hegel's Linguistic Thought in the *Philosophy of Subjective Spirit*: Between Kant and the "Metacritics" ' in *Essays on Hegel's Philosophy of Subjective Spirit*, pp. 181–200.

133 *W* 10: Addition to § 468, 288; *Philosophy of Mind*, p. 228.

134 *W* 10: Remark to § 469, 288; *Philosophy of Mind*, p. 228.

135 Angelica Nuzzo, 'Anthropology, *Geist*, and the Soul-Body Relation: The Systematic Beginning of Hegel's *Philosophy of Spirit*' in *Essays on Hegel's Philosophy of Subjective Spirit*, p. 1.

136 Pinkard, for instance, argues that, although Hegel claims spirit is both free from and within nature, we should not interpret this as a 'dualist account of freedom as involving nonnatural powers'. Pinkard, *Hegel's Naturalism*, p. 30.

137 *W* 6: 471; *Science of Logic* (Miller), p. 762.

138 It is worth noting here that spirit does not sublate temporality in the same way that it sublates spatial extension. To be sure, spirit sublates time, but it does so by granting the past and future ontological distinctness (*W* 9: Remark to § 259, 52; *Philosophy of Nature*, p. 37), and this is fundamentally different from the manner in which spirit sublates space, namely, by turning inward in such a manner as to no longer be spatially extended. Thus, spirit is intrinsically temporal, and this is largely due to the fact that spirit and time are both negations of self-external being. This is why Edward Casey identifies Hegel as a 'temporocentrist' for whom time is more basic than space (*The Fate of Place: A Philosophical History* [Berkeley: University of California Press, 1998], p. x). I think this is right with respect to Hegel's conception of spirit—his confusion of geography for history notwithstanding. I also think, *pace* Casey, that this is a good thing about Hegel; our account of human nature ought to show that time is more essential to human nature than place is, and philosophers like Hegel are at their worst when they depart from this insight and grant too much significance to place. But the identification of Hegel as a 'temporocentrist' needs to be limited to Hegel's conception of spirit; he is certainly no 'temporocentrist' with respect to nature.

139 See *W* 10: Addition to § 389, 46–47; *Philosophy of Mind*, p. 32.
140 For Hegel's most important critique of Spinozism, see the transition from the 'Doctrine of Essence' to the 'Doctrine of the Concept' in the *Science of Logic* (*W* 6: 246–253; *Science of Logic* [Miller], pp. 578–583). It is here that Hegel argues that Spinoza could not see that his own system necessitated a move to self-determining subjectivity, i.e., that substance negates itself and becomes spiritual freedom.
141 *W* 10: Remark to § 415, 203; *Philosophy of Mind*, p. 156. Translation modified. It is important to note, however, that Hegel believes the concept of subjectivity is already implicit in Spinoza's thought and one need only render this implicit concept of subjective freedom explicit by drawing out the self-negating negativity in the *Ethics* which Spinoza himself didn't thematise. As Hegel writes in the *Science of Logic*, 'The only possible refutation of Spinozism must therefore consist, in the first place, in recognizing its standpoint as essential and necessary and then going on to raise that standpoint to the higher one through its own immanent dialectic.' *W* 6: 250; *Science of Logic* (Miller), 581.
142 Another way to put this is that Hegel's critique of substance ontology in all its early modern forms makes him *more* committed than the orthodox Spinozist is to an immanentist, unified picture of reality.
143 Pippin, 'Naturalness and Mindedness: Hegel's Compatibilism', *European Journal of Philosophy* 7 (1999), pp. 197–198.
144 See, for example, McDowell, *Mind and World*, pp. 87–88 and Pinkard, *Hegel's Naturalism*, p. 7.
145 Sebastian Gardner, 'The Limits of Naturalism and the Metaphysics of German Idealism' in *German Idealism: Contemporary Perspectives,* ed. Espen Hammer (London: Routledge, 2007), p. 37.
146 McDowell, *Mind and World*, p. 88. Emphasis modified.
147 Pippin, *The Persistence of Subjectivity*, p. 189. See the second note in Chapter 4 above.
148 Pinkard, *Hegel's Naturalism*, p. 19.
149 Pinkard, *Hegel's Naturalism*, p. 21.
150 Pinkard, *Hegel's Naturalism*, p. 20.
151 Pinkard, *Hegel's Naturalism*, p. 20.
152 *W* 9: Addition to § 249, 34; *Philosophy of Nature*, p. 22. Translation modified. See also Hegel's discussion of the idea that 'nature makes no leaps' in the Doctrine of Being. *W* 5: 440–441; *Science of Logic* (Miller), p. 370.
153 *W* 9: Addition to § 239, 34; *Philosophy of Nature*, p. 22.
154 William Wallace, *The Logic of Hegel: Prolegomena to the Study of Hegel's Philosophy and Especially His Logic* (Oxford: Clarendon Press, 1894), p. 476.
155 Sedgwick, *Hegel's Critique of Kant*, p. 67.
156 DeVries, *Hegel's Theory of Mental Activity*, p. xii. Oddly, in this very passage, deVries notes that Hegel is not a 'total naturalist', and yet deVries insists upon a naturlistic reading nonetheless. In defence of deVries's view, it is true that the liberation of spirit is gradual, which means that the transition from nature to spirit does not take place in a single logical moment. Yet as

I have argued, Hegel clearly understands thought to *essentially* distinguish spirit from nature—even if thought unfolds in a gradual logical sequence of non-natural forms. Cf. deVries, who remarks:

> There is no clear break between nature and spirit; rather, these are two poles between which there is a complex series of intermediate stages. Hegel draws the line between nature and spirit where he does, not because there is some one clear mark of the spiritual that suddenly appears on the scene, but because at that point a sufficient number of the characteristics of the spiritual have appeared to justify a distinction. From this point on, the spiritual makes itself ever more evident.

DeVries, *Hegel's Theory of Mental Activity*, p. 49.

157 *SW* I/2: 171–172; *Ideas*, pp. 133–134.

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# Part 3
# Conclusion

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# 8 Logical Emergence and the History of Nature

Throughout this book, I have argued that Schelling and Hegel are committed to the shared task of elucidating the manner in which spiritual freedom is made possible and necessary by the inner structure of nature. For both philosophers, spiritual subjectivity is the crowning achievement of nature's inorganic, non-conscious, non-spiritual activity. I have therefore argued that we should understand the spiritual freedom celebrated by Schelling and Hegel as emergent from nature, as an ontological consequence of nature's being.

I have attempted to highlight the distinctiveness of this standpoint by emphasising the *rational* necessity at work in the development from nature to spirit. On my view, the possibility opened up by idealist philosophy of nature is that nature can be shown, through sheer reason, to necessarily lead to the emergence of spiritual life. Their commitment to elucidating this rational necessity is one of the things that sets Schelling and Hegel apart from the various philosophical positions that currently go under the banner of non-reductive naturalism.

I have also tried to show that Schelling and Hegel—like more recent emergentists—are not describing the *historical* emergence of spirit. Indeed, that Schelling and Hegel defend a logic or metaphysics of emergence does not require that they understand this logic or metaphysics to be realised diachronically. On the contrary, as we have seen, both Schelling and Hegel insist upon elucidating the *ahistorical* development at work from the more basic to the more concrete stages of nature. To inquire into the *historical* development of nature seems to be, then, a separate philosophical project. And, in certain ways, I think that is right. I also think, however, that there is something dissatisfying about the ahistorical approach to the philosophy of nature—and to emergence more generally—that has been the focus of this book. The reasons for this dissatisfaction should become clear in this concluding chapter, which reflects upon the potential, within the idealist framework, for conceiving of spirit as historically emergent from nature.

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In order to pursue this line of thought, I begin with the late Schelling's critique of Hegel. My intention is not to defend the late Schelling's general philosophical perspective, but rather to isolate an insightful critique regarding the apparent limits of the idealist account of the emergence of spirit. This will allow me to revisit Hegel's and the early Schelling's respective philosophies of nature in order to discover how far, if at all, the project of speculative physics might go in attending to the historical emergence of humanity. In the final section of this chapter, I suggest that it is only with Schelling's *Ages of the World* that idealism is transformed into a project of elucidating the necessary stages of nature's immanent development as an essentially historical process.

## The Late Schelling's Critique of Hegel

In Chapter 4, I considered the late Schelling's criticism of the transition from logic to nature in Hegel's system. Central to that criticism is the idea that logical thought supposedly remains bound up within itself in Hegel's system and therefore requires familiarity with something real *outside* thought in order to justify the philosophical transition from pure logic to the concrete philosophy of nature. I argued that this criticism of Hegel, especially as it is found in Schelling's Munich lectures *On the History of Modern Philosophy*, grossly misrepresents Hegel's project. But as Markus Gabriel has noted, the late Schelling has more than one critique of Hegel, and the later Berlin lectures in particular contain far more insightful criticisms of Hegel than does the 'admittedly superficial discussion of Hegel's system in his lectures *On the History of Modern Philosophy*.'[1]

As in the Munich lectures, Schelling is at pains in the Berlin lectures to distinguish between the two essential parts of philosophical science: the 'negative' (i.e., rationalism) and the 'positive' (i.e., a 'metaphysical empiricism'). It is of the utmost importance to recognise that the late Schelling is fully committed to *both* negative and positive philosophy. According to Schelling, philosophy will achieve scientific completeness only by pursuing both avenues of philosophical inquiry. This is an especially important point to acknowledge when analysing the late Schelling's critique of Hegel, since it helps us to see that Schelling's critique of Hegel *cannot be* that Hegel thinks he is capable of grasping *what is* in *thought*. That can't be the case, because Schelling himself remains, until the end of his life, entirely committed to the rationalist project of comprehending *what there is* through sheer reason. According to the late Schelling:

> Reason is, properly speaking, concerned with nothing other than just being and with being according to its *matter* and *content* … What is

> real does not stand in opposition to our thinking as something foreign, inaccessible, and unreachable, but … the concept and the being are one.[2]

Note the proximity between Schelling's description of his own 'negative philosophy' here and Hegel's description of speculative logic as a return to the 'higher conception of thinking' found in ancient metaphysics, in which 'thinking (and its determinations) is not anything alien to the object'.[3]

Once we acknowledge that Hegel and the late Schelling agree upon the immanence of thought to being, we can set aside Schelling's misleading comments—indeed, his largely misguided criticism—regarding Hegel's system as being 'merely' conceptual or 'merely' logical, as if the conceptual or logical were not immanent to being itself for Hegel. To be sure, the late Schelling sees Hegel's philosophy as 'empty, logical, a thinking that … has as its content *only* thinking',[4] refusing to acknowledge that Hegel would agree entirely with Schelling's claim that 'the *truly* logical, the logical in real thought, has in itself a necessary relationship to being.'[5] As I see it, this misrepresentation of Hegel's system ultimately works against Schelling, for it obscures his more profound insight regarding the limitations of Hegel's thought and the problem posed by nature's history to Hegel's form of idealism. In order to elucidate this more profound insight, we must first acknowledge the late Schelling's own commitment to unpacking the logical structures of reality through sheer thought, and secondly grant Hegel what Schelling refuses to grant him, namely, that Hegel's logical system moves immanently through the determinations of being itself. On my view, Schelling could (and should) have granted *this* to Hegel without thereby giving up on his more penetrating criticisms. Those criticisms only come to light when we interpret Hegel charitably, which in this case means understanding Hegel as Schelling understands his *own* 'a priori philosophy': not as a 'merely logical philosophy that would exclude being' but as the exhibition, in pure reason, of being itself.[6] Thus, in order to see what is involved in the late Schelling's more compelling, albeit largely implicit, critique of Hegel, we should consider what the late Schelling sees as the limit of his own negative, or rationalist, philosophy.

According to the late Schelling, negative philosophy is the science of reason that discloses the essential truth of what is. The rational movement of thought discloses how beings are necessarily structured; it tells us what 'essences' or universal categories will necessarily be exhibited by individuals in the world. In this way, thought illuminates the *being* of individual entities and processes, viz., as instances of natural kinds and instantiations of certain categorial structures. But individuals are not reducible to their essential or categorial being. Here Schelling draws upon the Thomist distinction between essence and existence. While the rationalist movement of

thought discloses *what* an individual is (*quid sit*), such thought is without the resources to contribute knowledge regarding the fact that an individual is (*quod sit*). Indeed, reason can tell us nothing about the sheer existence of an individual as the singular being it is. Therefore, once one pursues the rationalist project of deriving the necessary features of reality, something further remains to be thought, namely, the *thatness* of individual being, the brute fact that this *particular* instance of a universal, rational structure *is* or *exists*.

It is perhaps helpful to consider one of Schelling's favourite examples: a plant. That there are plants *at all* or plants *in general* is no contingent fact. For if there is *anything* at all, Schelling tells us, there will be plants, and this knowledge is provided by a rationalist philosophy of nature. The late Schelling never gives up on the idea, therefore, that in principle 'a continuous progression is discoverable from the highest Idea of reason all the way down to the plant as a necessary moment of the same.'[7] However, there are not, in fact, 'plants *in general*' but *plants*—actual, individual plants, contingently existing 'at this point in space and at this moment in time.'[8] And it is the *existence* of the individual plant that the late Schelling claims cannot be grasped by the movement of speculative thought. It is impossible, in other words, to rationally derive the sheer existence of a flower in one's garden. On this point, Schelling is in full agreement with Hegel, who, in his defence of the early Schelling against Krug, claims that the philosophy of nature was never meant to derive the existence of particulars.[9] Yet in his late philosophy, Schelling becomes struck by the fact that reason captures only the whatness and not the thatness of individual beings. Indeed, for the late Schelling, this indicates a real limit to idealist metaphysics. The question the late Schelling asks, then, is how philosophical science might attend to the existence of individuals qua individuals.

As I see it, the late Schelling's answer to this question is on the whole unconvincing, but it nevertheless contains a profound insight—an insight that will shortly bring us to the theme of nature's history. According to Schelling, idealist philosophy will be in a position to shed light upon the sheer existence of individuals if it supplements the rationalist philosophy of nature with what he calls a metaphysical empiricism; and *this* is only possible by abandoning the pantheistic tendencies of idealism and embracing a more orthodox conception of God. According to the late Schelling, to explain the existence of individuals in the world, we have to refer to a contingent act of creation—namely, God's free (and now this means 'undetermined') *decision* to create the world. It is only with an eye to such a creative act that we can understand anything about *why* the things that exist are in fact *there*.

This explains the fact that the late Schelling's critique of Hegel's system is bound up with a critique of Hegel's conception of God (a conception

of God that is, in many ways, shared with the earlier Schelling). Part of Schelling's issue with Hegel is that the latter understands religious language to be allegorical as opposed to literal; 'God' is a mere representation or image of reason, or the absolute, for Hegel. But this disagreement about how to interpret religious language does not exhaust the theological dispute between Hegel and the late Schelling. On the late Schelling's view, Hegel's conception of God is mistaken because it has nothing to do with the 'free creation of the world [*freie Weltschöpfung*]' indispensable to a Christian understanding of things, and this can be seen in three interrelated aspects of Hegel's conception of the manifestation of *logos* as nature (properly represented in religious language, according to Hegel, as divine *kenosis*).

1. Recall that, according to Hegel, nature *just is* the "absolute Idea"—or reason—in its primary manifestation as *real*. This suggests to Schelling that Hegel is a pantheist of some kind. Although religious imagery depicts God as separate from creation, this is a *mere* depiction, one which does not accurately portray the relationship between reason and the world on Hegel's view. For Hegel, there is no reason, no absolute Idea, that is not realised, no divine essence that is unexpressed, set apart from the world. To translate this back into theological language, there is, for Hegel, no enduring distinction between God and his creation. And according to the late Schelling, if God is thought along utterly pantheistic lines, then God loses all independent identity.
2. Recall also that, for Hegel, the logical development that proceeds from nature to spirit is a rationally necessitated development. According to Hegel, it is logically impossible for there to *not* be a nature, for there to *not* be living things, for there to *not* be human beings. Yes, religious imagery depicts God as free, but the freedom of reason, or the Idea, is not the kind of freedom we often imagine when we imagine God's free activity; the freedom of the Idea is better understood as the absolutely necessary self-determination that flows from what the Idea *is*. What we call God, then, cannot but reveal itself as the world with which we are familiar. And this, for Schelling, is the second problem with Hegel's pantheism: if God is understood in terms of necessary movement (i.e., as the rational self-determination of the Idea), then he is not *free*, for he is *determined* by rational necessity to be in perpetual motion. On the late Schelling's view, if God never actually puts himself *into* motion—as pure *actus*—then God's self-revelation is not a free act; God cannot help but reveal himself. In other words, to conceive of God as immanent to the world is to deny divine freedom.
3. Finally, recall that, according to Hegel, the logical development that moves from nature to spirit is not a chronological development; the philosophy of nature is not describing historical events in which natural

> forms come into existence, but logical processes that are at work in the *being* of nature. Hegel's kinetic system of reality is an atemporal system. Even if religious imagery represents something like the creation of the world as an *event*, this speaks to a lack of conceptual clarity on the part of that religious imagery. There is no sense in which reason realises itself in nature as a graduated *temporal* sequence. The *actual*, *historical* emergence of natural things is something that has little to do with reason (or God).[10]

For these reasons, the late Schelling argues that God's self-revelation is entirely misunderstood by Hegel. For the late Schelling, the God of revelation must be (1) *other than* and (2) *free from* the movement of *what is* such that (3) creation actually *takes place*.[11] According to the late Schelling, while the world is intelligible—while we can understand, through sheer reason, how each level of reality gives rise to the next—the existence of the world and the individuals that populate it rests on a contingent and non-necessitated act of creation, an act that can only be explained with reference to that which transcends reason and, indeed, transcends being itself.

As stated above, I am not especially sympathetic to the late Schelling's line of reasoning here. I do, however, think it helps us to identify a limit to the philosophy of nature as we have considered it up to this point. And to see this, we can note that the three criticisms of Hegel outlined above are, in principle, separable. In fact, as I will argue, the earlier Schelling himself—at times implicitly, and for a brief period of time, explicitly—conceives of God's self-revelation as nature, and then as spirit, to be a *free* yet *immanent* and *necessary* process that takes place *in time*. We can therefore isolate the late Schelling's third criticism of Hegel's pantheism from the first two criticisms and the orthodox theology that motivates them. Indeed, the late Schelling's point regarding the absence of an account of historical creation in Hegel's system gets to the heart of Hegel's logic of nature and discloses its essential limitation. And, significantly, it is only the third criticism of Hegel that directly touches upon the problem of accounting for the existence of individual things. For if there is no room in philosophy for a consideration of historical creation, then philosophical science will necessarily miss out on something fundamental about reality, namely, the processes through which individuals—and, with them, entire forms of nature—come to be. In other words, being is not only the immanent movement of one rational structure necessitating another in a continuous progression; being involves the actual coming-into-existence of individuals and the natural kinds they realise. So long as rationalism is without the resources to account for the actual genesis of distinct individuals, there remains a highly significant aspect of reality that goes entirely unconsidered by philosophy. And it is for this reason that the late Schelling seeks to ground a 'positive

philosophy' that would supplement the negative philosophy of essences with an empirical inquiry into how such essences are *actually exhibited* in the world. Positive philosophy will therefore investigate how the rationally necessary structures of reality become manifest in history.

We are now in a position to bring this discussion back to the topic of the philosophy of nature. So long as the various stages of nature described by the idealist correspond to an *atemporal* (or *strictly* logical) hierarchical system of stages, something fundamental has been left out of that philosophy of nature, namely, a consideration of the actual historical emergence of various forms of nature and, ultimately, of spirit. Indeed, if Schelling and Hegel agree that the essential *forms* or structures of nature are entirely immanent to nature—that is, if thought is immanent to being—then they ought also to agree that the essential forms of nature only *are* insofar as individuals in nature instantiate those forms. Thus, to attend to the actual existence of particular beings is to consider the manner in which the rationally necessary structures of nature themselves come to exist.

In order to unpack the full significance of this point, it is helpful to note the terminological emphasis placed in Hegel's system upon activity (*Tätigkeit*) and movement (*Bewegung*) as defining features of the dialectic, including the dialectic of nature. The late Schelling is alive to this, and he is deeply critical of Hegel's conception of actuality (*Wirklichkeit*) as activity and movement, since such a conception obfuscates the *productive* dimension of *energeia*.[12] On Schelling's view, philosophy must not only conceive of what is actual, but actuality as such,[13] i.e., the coming into existence of what is actual. This latter task requires that we conceive of *energeia* not as simple activity or movement playing out behind the scenes (yet immanent to nature) but as an activity that engenders *products*—real, generative action. From this perspective, the atemporal activity of *logos* is possible if and only if beings have in fact emerged in the world, beings that manifest the rational structures that can be seen to develop logically out of one another in an ahistorical fashion. What is necessary to comprehend, then, is not only the dialectical activity of the being of beings, but the genesis that makes such activity possible, hence Schelling's preference for conceiving of the development of nature in terms of *Erzeugung*, *Hervorbringen*, and *Schöpfung* as opposed to *Tätigkeit* and *Bewegung*.

It is with respect to this distinction between production, on the one hand, and activity, on the other, that we should read the late Schelling's interest in actual, historical events (*Geschehen*) as opposed to the merely 'eternal happening' of the rational, dialectical process. In Schelling's words, 'an eternal happening is no happening at all.'[14] The late Schelling therefore seeks to ground a metaphysical empiricism which would go hand in hand with the negative philosophy, exhibiting how the rational potencies actually manifest themselves in history. It would be uncharitable, then, to

superficially interpret the late Schelling's claim that, in the philosophy of nature that preceded his positive philosophy, 'everything happened only in *thoughts*', that 'this whole movement [of the philosophy of nature] was only a movement of thinking'.[15] Schelling's point—at least when he is describing his *own* philosophy of nature—is that the immanent, rational movement of being itself brackets all attention to the actual coming into existence of the various forms of nature. And this insight regarding the limits of rationalism is just as applicable to *Hegel*'s philosophy of nature as it is to the early Schelling's. The essence of the Schellingian critique of Hegel, then, is the following: so long as philosophy refuses to consider the historical generation of beings, philosophy will fail to become a complete science of actuality.[16]

Although Hegel had no opportunity to respond to the late Schelling, it is clear how he would have responded to this argument. From a Hegelian perspective, we forgo a *philosophical*, i.e., *rational* investigation into nature as soon as we focus on natural-historical generation. This is because, according to Hegel, the essential *being* of nature has little to do with creation, production, or any other historical phenomena. And it is this essential being of nature that a philosophy of nature is after. As Hegel puts it, 'Philosophy is not meant to be a narration [*Erzählen*] of happenings [*was gescheint*] but a cognition of what is *true* in them.'[17] This truth, for Hegel, is precisely the dialectical movement of the logical structures immanent to any 'happening'. His preference, then, for conceiving of the dialectic of nature in terms of 'movement' or 'activity' is one he knowingly affirms as the only way to develop a proper ontology of nature. Indeed, this is why he insists that philosophy not rely upon 'expressions of sensuous conception like *going forth* [herausgehen]'—expressions that are central to Schelling's way of thinking.[18] To do so is to lose sight of the distinctively logical character of metaphysics and, consequently, the being of nature itself.

With these remarks we arrive at a fundamental difference between Hegel's thought and that of the late Schelling. Whereas Hegel understands the image of creation as an illustration or representation of a strictly logical feature of reality (i.e., the self-manifestation of *logos* as nature and spirit), Schelling understands creation as a real 'happening' that is essential to the being of beings.[19]

But how does the early Schelling fit into this picture? Hegel's refusal to conceive of the development of nature in terms of production, generation, or grounding indicates that Hegel would not only have been critical of the late Schelling's turn to Christian orthodoxy, but that, from a Hegelian perspective, Schelling was always on his way to (mis)conceiving nature in terms of historical genesis, due to the latter's emphasis on nature's creativity. Hence the 'great difficulty', on Hegel's view, of Schelling's philosophy, namely, its inability to proceed in a strictly logical fashion that

would eschew imagistic representations of natural development.[20] As I see it, Schelling was indeed already on his way to conceiving the philosophical significance of nature's history, despite the fact that nature's *Stufenfolge* is not understood in the early work as unfolding historically.[21] The early Schelling consistently interprets nature in terms of generative activity, even when he insists on the atemporal character of nature's system of stages. Now that we have considered the late Schelling's distinction between the 'positive' and the 'negative', we can return to the early Schelling and consider the extent to which he may have already been reflecting upon the possibility that nature's history is of philosophical significance.

**Two Kinds of Becoming**

Drawing upon the late Schelling has helped us to see that there are at least two philosophical senses of 'becoming' (*Werden*) relevant to the idealist philosophy of nature. In Hegel, 'becoming' is properly speaking an ontologically primitive category, found at the very beginning of the *Science of Logic*, followed by many more concrete logical determinations. Nonetheless, the late Schelling makes a convincing case that the entirety of Hegel's system can be seen as one of Heraclitean 'becoming', so long as we interpret becoming not as the indeterminate flux which is found at the beginning of the *Logic*, but the dialectical *movement* (*Bewegung*) that characterises the being of beings, i.e., the immanent activity (*Tätigkeit*) that drives the whole system of reason's self-differentiation. Indeed, it is this same movement which is at work in the transition from nature to spirit, where spirit logically emerges from the dialectical activity of nature. The kind of emergence at work in Hegel's system, then, can be understood as 'becoming' in a dialectical-kinetic sense, an ontological development in which nothing 'happens' in the historical sense of a happening.[22]

Yet we can also understand 'becoming' as coming-to-*be*, i.e., as the actual, historical emergence of a being or a form of being. This is undoubtedly what the late Schelling has in mind with respect to God's free creation of the world and the subsequent historical appearance of God in human history. But is this the only place where we might find a conception of becoming as historical genesis in Schelling's thought? In the *Freedom* essay, he argues that 'the concept of becoming is the only one appropriate to the nature of things,' and at least one reason for this is because such a concept expresses the fact that everything that exists is born of God's yearning for self-revelation.[23] Thus, already in his immanentist theology of 1809, Schelling thinks of becoming along explicitly genetic lines. And this is not a new thought for Schelling in 1809. Throughout his earlier philosophy of nature, he is intent on conceiving of nature in terms of productivity. As he puts it in the *System* of 1804, the fundamental explanation

for everything that *is* is 'the infinite affirmation of God' or '*creative nature* (*natura naturans*)'.[24] This is precisely why, in the *First Outline* of 1799, he understands nature in terms of *subjectivity*: '*nature as productivity (natura naturans) we call nature as subject*'.[25] Nature is 'subjective' in the sense that it is not a mere thing (i.e., an object or an aggregate of objects) but the activity that brings things into existence.

This is one way in which the early Schelling differs from Hegel: he seems to think that philosophical science should say something about the natural processes responsible for the generation of actual things (inorganic, living, and human). But it is easy to get carried away by Schelling's genetic terminology. As I suggested in Chapter 3 above, the thesis about 'becoming' in the *Freedom* essay only implicitly concerns historical becoming; the key point Schelling is making in that passage has to do with the logic of identity—a logic that is central to the Schellingian idea that the existence of spirit is grounded in nature. The *Freedom* essay is not concerned with the historical generation of spirit, or of anything else for that matter. And this is consistent with the main focus of the philosophy of nature as Schelling had pursued it prior to publishing that essay. Although Schelling is interested in the production of natural products, the central form of development at work in the philosophy of nature is the atemporal development of matter, understood as a sequence of potencies. Schelling's early system is therefore more similar to Hegel's than is often assumed. This is why I have emphasised the *logic* of emergence in both Schelling and Hegel, despite the absence in Schelling's work of any thematisation of logic per se. Neither Schelling nor Hegel understands the rational transitions presented in the philosophy of nature to correspond to a natural history in which the stages of nature come to be in time.

In fact, on a number of occasions, Schelling explicitly rejects the idea that what happens in nature is philosophically significant. In the 1797/98 essay 'Is a Philosophy of History Possible?', he is unequivocal: there can be no philosophy of history, including a philosophy of natural history, since philosophy exclusively concerns the a priori structures of reality that, according to this text, lack historical significance on account of their a priori character. Schelling goes on to claim that, although certain natural phenomena, such as the seemingly sporadic eruptions of a volcano, may appear to be of historical significance, this is indeed mere appearance.[26] Were we to grasp the inner mechanism at work in such phenomena, we would understand them to follow an a priori law, which would make them just as ahistrocial—i.e., just as repetitive and therefore historically insignificant—as the motion of the hand on a clock.[27] The same idea is rehearsed in the 1800 *System of Transcendental Idealism*: natural events appear historical only if we represent these events as departures from the necessary determination of natural law.[28]

I will go on to argue that the early Schelling *does* have something important to suggest about nature's history, but his claims about nature lacking a history should not be ignored. Moreover, we should note that these claims are of a piece with Schelling's general interest in providing an account of the atemporal development that leads from the dynamic construction of matter to the upright posture of the human animal. At least up to the *Ages of the World*, Schelling does not conceive of nature's rational development into life and spirit as something that happens in time.[29]

And yet, Schelling's philosophy of nature—unlike Hegel's—is full of passages that imply that the history of nature may be philosophically significant. We have already noted the importance, for Schelling, of thinking about nature as productive of individual products. But there are other signs of his interest in nature's history, some of which seem to associate that history with the development of nature's stages or potencies. In the essay on history that ultimately rejects the idea that nature has a rationally or philosophically significant history, Schelling shows momentary enthusiasm for two hypotheses regarding the chronological development of life-forms, both of which require reference to ideal forms or archetypes, i.e., something essentially rational and therefore philosophically significant.[30] He, again, ultimately claims that this amounts to a mere *appearance* of natural history, but he is clearly intrigued by the possibility of developing a 'natural history in the proper sense of the term'[31]—and he remains so. Thus, in a note near the end of *On the World-Soul*, he claims that, from the perspective of the future, it will become clear that the research into nature that took place in the 1790s will be seen as the beginning of a new epoch in natural history.[32] (Schelling identifies Kielmeyer's research into the progressive series of life-forms as initiating this new epoch, and although Kielmeyer is not primarily interested in the historical development of those life-forms, he nevertheless argues that natural research should at some point explain the historical development of life.)[33] In the Preface to that text, Schelling argues against what he takes to be the empiricist reason for rejecting the idea of the historical development of life-forms, namely, that we have not been able to perceive or record such development from one form of organisation to another. Against that view, Schelling suggests that the history of natural development may simply have occurred over much longer periods of time than could have been perceived by human beings.[34] This would not make such development unintelligible but, on the contrary, something to which a rationalist philosophy of nature would presumably need to attend, given the failure of experience to put the philosopher into contact with the pre-human past. Schelling continues this line of thinking in the *First Outline*, in which he suggests that there may come a day when natural history will become a genuine science precisely in the manner ruled out by Kant in the Preface to the *Metaphysical Foundations*.[35] According

to Schelling, 'natural history' would come to signify not only a taxonomical '*description of nature*' but 'a *history* of nature itself', that is, a scientific account of what has *happened* in nature according to rational principles that are immanent to nature.[36] And in the *Introduction to the Outline*, he suggests that understanding the 'great interdependence' of all natural phenomena—and surely this includes comprehending the rational connections between nature's stages—will 'shed new light on the history of the whole of nature'.[37]

In Chapter 2, we hit upon a further example of Schelling's philosophical interest in the historical development of nature: the *System* of 1804 implies that the third potency, life, cannot be fully understood in terms of the ahistorical sequence of life-forms that runs from plants to infusoria to animals. There is a second way to conceive of the sequence of life-forms, a bifurcated sequence that begins with infusoria and leads to the plant kingdom, on the one hand, and the animal kingdom, on the other, all plants and animals having their natural origin in a more basic form of life.[38] Here we catch sight of Schelling's interest in a historical-developmental account of the relationship between life-forms, and we once again encounter his concern with the coming-into-existence of things and the kinds to which they belong.[39] Schelling's hyperrationalist *System*, then, seems to have something significant to say about the history of nature.

Why would Schelling think that comprehending the rational structure of nature might tell us something about nature's history? To answer this question, we need to bracket the position outlined in the history essay and hold the following two thoughts together: (i) nature's history is philosophically significant because that history is rational; and (ii) nature is nevertheless genuinely historical because it is essentially creative. It does not follow from the fact that nature is essentially creative that there is some irreducible contingency or irrationality at the heart of nature; on the contrary, creativity can be understood to be entirely of a piece with rational necessity. As we saw in Chapter 1, this is how Stone distinguishes Schelling's early philosophy of nature from Hegel's and Schopenhauer's. If we follow *this* Schelling, we can understand how he can insist, at one and the same time, that nature is a *naturing* nature (*natura naturans*) and that 'there is no chance in nature at all'.[40] In other words, the rational necessity and the productivity that define nature are identical: nature is a self-determining process that creates according to its own rationally necessary laws.

Emphasising this strand of thinking in Schelling's early philosophy of nature, it becomes clear that nature's teleological, rational character is inseparable from the natural production of actual entities. As Schelling states, nature is a 'purposive creatrix [*zweckmäßige Schöpferin*]' who has 'brought forth all the multiplicity of species, types, *and individuals* in the world.'[41] Indeed, if nature creatively acts in accordance with its intrinsic

rationality, then 'everything that happens or arises is an expression of an eternal law.'[42] Schelling is clearly operating here with an expansive conception of reason, such that nature's rationality is seen to determine not only the general structure of reality (i.e., the potencies), but also the actual production of particular things. And, importantly, the rational character of these productions in no way detracts from their status as acts of genuine creativity. The implication of this strand of Schelling's thought is that the historical generation of particular beings is a process to which a rationalist philosophy of nature ought to attend.

To be sure, Schelling also claims that, were we to devote ourselves to a philosophical history of nature, we would need to develop a history not of 'natural objects' but of 'generative nature itself'.[43] But what would it mean to narrate a history of generative nature without reference to certain natural objects generated by this nature? Are there not certain products whose historical emergence sheds light precisely on the rationale and power at work in 'generative nature itself'? Schelling himself acknowledges that organic nature is distinct from inorganic nature insofar as the former seems to have originated at some point in time.[44] Might the historical origination of life be an appropriate object of study for the philosophy of nature?

Although Schelling's early work is ambiguous on this point,[45] his interest in nature's creative process is undeniable. In this way, his early system already bears the seeds of his later Hegel critique. Certainly, Hegel also believes that nature will necessarily involve particulars, but he holds the more commonplace view—admittedly shared by Schelling in certain texts—that the actual production of particulars is a non-rational process with which philosophy need not concern itself. By contrast, Schelling's more provocative and thoroughgoing rationalism holds that nature is entirely rational, and that this rationality extends to each and every natural-historical production; on this view, actual phenomena—and not only their intrinsic, logical structures—should be interpreted as rationally necessitated by nature, as opposed to being generated by some contingent, natural-historical process.[46] On this reading of Schelling's early philosophy, then, both the general stages (or forms) of nature and all individuals are understood to be necessary features of a rationally ordered cosmos. It does not follow from this that the philosopher of nature should attempt to derive the existence of each and every particular being from sheer thought. The point, rather, is that the actual, historical emergence of particular beings is always determined by rational necessity, and never by chance.[47] And in committing to the idea that there is a *reason* for the existence of each and every thing, Schelling also lays the groundwork for developing a sophisticated philosophical account of the history of the whole of nature. Thus, insofar as the early Schelling seems to think that

philosophy ought to attend to the history of the cosmos, we can understand him to be on his way to his later critique of the limits of ahistorical rationalism.

And yet, because the early Schelling conceives of natural production as both rationally necessary and wholly immanent to nature, we are in another respect quite far afield from the late Schelling's interest in historical genesis. For the late Schelling, God's free creation of the world and the spiritual history that follows this act must be understood in terms of both contingency and transcendence: what has happened in history *did not have to happen*, and the reason history *did* unfold the way it did can only be explained with reference God's free—and this means 'free from necessity'—decision to create the world. From the perspective of the late thought, then, rationalism hits a fundamental limit; it cannot answer the question about why there is something rather than nothing. To deal with that question, the late Schelling argues, one must develop an empirical science attentive to God's actual creation of the world and his free activity in history—a history that accounts for why the things that exist are in fact *there*. If we interpret the early Schelling, then, as simply on his way to his late thought, we will miss out on the unique vision implicit in Schelling's early thought. This vision doesn't embrace contingency, transcendence, or empiricism, but seeks to account for the history of nature *within* a necessitarian, immanentist, and rationalist system. The implicit call for a speculative natural history that we find in the early philosophy of nature is therefore utterly distinctive and can be boiled down to the following thought: if the production of individual products is an entirely rational, immanent process, might nature's history involve philosophically significant events, events that will be of importance to understanding the reason of the world?

The most obvious way to construe this idea would be to interpret nature as a historical *Stufenfolge*, an idea that Schelling himself hints at when he claims that the history of the earth involves successive stages in which the different categories of physics predominate—an age of terrestrial magnetism, followed by an age of terrestrial electricity, followed by an age of terrestrial chemistry.[48] If this is indeed the direction in which Schelling's thought is headed, then a historical speculative physics would involve not the derivation of the existence of all individuals but rather a narrative presentation of the most general forms of nature as originating in time with the emergence of particular beings. The essential structure of plant life, for example, would be shown to emerge at a certain point in history with the emergence of actual plants. Lovejoy is not wrong, then, to see in the early Schelling and especially in the *Freedom* essay the beginning of the 'temporalisation' of the *scala naturae*.[49] Although at the time Schelling explicitly conceived of these texts as elucidating the atemporal structure of

emergence, there is within his thinking an implicit demand to go further, to understand the immanent potentiation of nature as a historical process, as if the actual coming-into-existence of life and spirit might be events worthy of philosophical consideration.[50] As we will see in the following section, this idea is not only absent in Hegel's system but it is also fundamentally incompatible with Hegel's conception of nature's immanent development.

### The Implications of Understanding Nature as Negative

Whereas the early Schelling indicates at least the possibility of conceiving of nature's *Stufenfolge* as developing chronologically, Hegel is adamantly opposed to such an idea. Indeed, Hegel is emphatic that the logical emergence of natural forms—and of spirit from nature—is without historical significance, since only spirit can be properly said to have a history.[51]

Before considering Hegel's reasoning here, we should first note that he did not simply lack interest in what has happened or occurred in nature's past. Hegel's rejection of the idea that nature has a significant history is far more fundamental to his thinking than a mere disinterest would be; he has an argument for why nature's history is insignificant, or why it can't be said to have a history in the proper sense. This does not mean that Hegel thought all research into nature's history was pointless. Not only did he insist that non-philosophical forms of thinking, such as empirical science, should attend to nature's history, but Hegel himself was deeply knowledgeable about the geological and biological sciences of his time. To take two examples: he was particularly sympathetic to Georges Cuvier's work in comparative anatomy, which draws heavily upon paleontology; and his organics is largely indebted to the research of Gottfried Reinhold Treviranus who, unlike Cuvier, was a proponent of the theory of species transmutation. To be sure, Hegel himself rejected this theory,[52] but his intellectual respect for Treviranus is just one of many examples of his indisputable acquaintance with the burgeoning discipline of the historical sciences at the beginning of the nineteenth century. We can therefore dismiss the idea that Hegel simply had a distaste for thinking about nature's history. The relevant question is whether Hegel recognises any ontological significance in that history and, if not, why not. For it appears that, on Hegel's view, the age of the earth and of the human species simply lack significance for a philosophical science that logically derives the necessary structures of nature; the philosophy of nature, according to Hegel, should not concern itself with the contingent history in which those structures first become manifest. But why does Hegel understand nature' history to be determined by chance? What view is at the basis of Hegel's idea that nature's history is irrational and therefore philosophically significant? In order to answer these questions, we need to consider the metaphysical

consequences of Hegel's conception of nature's immanent development as a process of self-negating negativity.

As we saw in Part II of this book, Hegel conceives of nature as the ontologically primary manifestation of the Idea or self-determining reason. This is a point often missed by both followers and critics of Hegel who assume that spirit—the *telos* of the system—is somehow guiding the movement of logic and nature from on high. Certainly, spirit is the *telos* of nature, but this is because nature immanently posits spirit as its own end. Thus, Hegel holds that spirit is ontologically dependent upon nature, and that nature is the fundamental or most basic manifestation of non-spiritual reason.

Yet because this fundamental manifestation of reason is one in which reason is *external* to itself—a manifestation of reason in which reason is *not* itself—it follows that the natural world is only implicitly rational. Indeed, reality proves to be truly rational, for Hegel, only in organic life and, ultimately, in the life of spirit. The ontological development from nature to spirit, therefore, is motivated by reason's self-externality, by the fact that, in its most basic manifestation, reason is lacking a fully rational, self-determining character. This means negativity—as is always the case in Hegel—does significant work. The *Encyclopaedia* Philosophy of Nature presents the manner in which self-external nature gradually turns in upon itself in a process of 'inwardisation', such that nature negates its negative or self-external character to become more explicitly rational and free. Thus, in organic life and even more so in the life of spirit, the negativity or externality of nature is negated through a process of self-negating negativity.

That Hegel conceives of nature's development as a process of self-negating negativity has important consequences for how he understands history. Once spirit is shown to be a necessary feature of reality, the absolute Idea (or self-determining reason) becomes explicitly and concretely self-determining—as opposed to implicitly and abstractly self-determining, as it is in the realm of nature. This means that whatever it is that spirit accomplishes in reality will by necessity exhibit the genuine *freedom* of rational self-determination. In other words, the empirical-historical activity of spirit will prove to be nothing other than the concrete, worldly manifestation of self-determining reason, hence Hegel's unwavering attention to the manner in which reason expresses itself in the history of political institutions, artistic production, religious consciousness, and philosophy itself. For the history of spirit is fully determined by the free movement of reason itself, i.e., reason that has come into its own in human thought and action.

The history of *nature*, by contrast, is determined only in *part* by its implicit rationality and, more specifically, only insofar as the history of nature must involve the logically necessary forms of nature that we find in the *Encyclopaedia*. But the encyclopaedic sequence of these forms is a

strictly ontological sequence that has no counterpart in the chronological development of nature. Instead, the historical appearance of those rationally necessary forms is determined exclusively 'by *chance* and by a *play* [of circumstances], not by *reason*.'[53] Natural history is not, therefore, a rational history of self-determining freedom. On the contrary, natural history is the contingent history of reason's ontologically primary being-outside-itself. Thus, whereas the history of spirit is an explicitly rational expression of freedom that demands philosophical attention, the history of nature is a contingently determined process with which philosophy need not concern itself.[54]

Hegel's conception of the rational history of spirit doesn't require that every last feature of spiritual life be rationally derivable. As Hegel remarks in the *Philosophy of Right*, Plato and Fichte overstep the bounds of rational science when the former recommends particular nursing practices and the latter philosophically 'constructs' detailed passport requirements.[55] Yet *major* rational developments of spiritual freedom *are* historical for Hegel. For example, the transition from the Judaic representation of God as transcendent person infinitely beyond the world to the Christian representation of God as also finite (and therefore truly infinite) involves not only a logical development of religious sensibility but a chronological expression of that logic, such that the religion of sublimity historically gives way to the fully revelatory religion of Christianity. In other words, within the realm of spirit, *Aufhebung* is an ontological and historical achievement. And there is absolutely nothing analogous to this chronological dimension of ontological development in Hegel's philosophy of nature. For Hegel, nature is self-external reason, reason that is not what it is. While this negativity is said to motivate the natural-dialectical process that culminates in the logical emergence of spiritual freedom, it also prevents Hegel from seeing nature's historical development as philosophically significant, since that history is understood to be largely determined by irrationality.

I take it that this explanation for Hegel's refusal to historicise nature's *Stufenfolge* sheds some light on the relationship between Hegel's system and evolutionary theory in the life sciences. It is somewhat besides the point, on my view, to focus upon whether Hegel might have endorsed an evolutionary theory were he alive today. Findlay suggests as much when he states that the 'only reason' Hegel was 'unprepared' to conceive of nature historically was that 'he lived in a pre-Darwinian age, and was, moreover, a somewhat timid conservative in regard to the detail of science'.[56] A more nuanced approach to this topic is taken by both Houlgate and Somers-Hall who concern themselves not with Hegel's own views about species evolution, but whether Hegel's ontology is logically compatible with Darwinian thought.[57] As I see it, however, the entire topic of Hegel

and biological evolution should be considered in light of Hegel's more fundamental commitment to the self-externality of nature. For this allows us to see that whether or not Hegel's system is compatible with evolutionary theory—and Houlgate and Somers-Hall offer persuasive arguments from either side of this debate—the fact remains that nature's history *cannot be of any philosophical significance*, for Hegel, because the *being* of nature is not properly historical. From a strictly metaphysical perspective, then, whether Hegel's ontology is compatible with the Darwinian life sciences changes nothing about how we should understand Hegel's philosophical view: nature's history, precisely because of its ontological status as self-external reason, is necessarily irrational and thus philosophically insignificant. It is therefore helpful to emphasise, as Grant does, that Hegel's speculative geology is just as ahistorical as his speculative botany and zoology.[58] For life is just one stage of a fundamentally ahistorical ontological structure in Hegel's system, and we get to the heart of his anti-evolutionism once we recognise that *all* natural history is irrelevant for Hegel's ontology of nature.[59] This is the case *even if* it turns out that one can be a Hegelian and a Darwinian at the same time.[60]

In Chapter 4, I suggested that a fundamental difference between Schelling's and Hegel's philosophies of nature concerns the fundamental concepts each philosopher employs in exhibiting the immanent development from nature to spirit. If we bracket the methodological differences between Schelling's and Hegel's systems, this crucial ontological difference comes to the fore: whereas for Schelling, nature raises itself to higher stages of rationality through a process of *intensification* or *potentiation*, for Hegel, this process proceeds by way of *negation*. For Hegel, nature—reason that is *not* rational—gradually negates its own *lack* of rationality and ultimately necessitates the existence of spirit, thereby achieving the inwardness of freedom that is self-negating negativity. What I want to suggest now is that this difference between conceiving of the emergence of natural and spiritual forms along the lines of 'powers' or 'negativity' is not only a difference between the manner in which Schelling and Hegel conceive of the immanent, atemporal development of reality, but it leads them to conceive of nature's history in very different ways. As we have seen, Hegel does not just happen to find nature's history uninteresting; rather, his identification of nature as self-external reason leads him to the view that nature's history is a contingent history (with the exception that the rationally necessary forms of nature must be instantiated at some point in time). That nature lacks reason—or is reason that lacks its own rational being—means that, for Hegel, what happens in nature is unimportant from the perspective of philosophical science. Schelling, by contrast, who understands nature's development in terms of rational intensification, does not understand nature to be rife with contingency or lacking in rational

self-determination. On the contrary, nature is wholly rational for Schelling, including the actual production of particular natural products.

This account of Hegel's expulsion of nature's history from the bounds of speculative philosophy can be further supported by reflecting on the manner in which the nature-spirit relation repeats essential features of the relationship between space and time in the system. Although it would be wrong to think that nature lacks temporality altogether, for Hegel, there is an important sense in which spatial extension is the fundamental determining structure of the whole of nature.[61] For at every stage of the philosophy of nature—in mechanics, physics, and organics—nature aims to rid itself of its constitutive self-externality. And as we saw in Chapter 6, this self-externality, in its most general expression, is nothing other than the three-dimensionality of spatial extension. In this way, time—the original self-negation of space—prefigures the more robust negation of nature achieved in the life of human spirit. In the transition from space to time and that from nature to spirit, a self-external reality negates itself and thereby transforms itself into self-negating negativity. Although in the case of spirit, this is a far more explicit and therefore self-determining form of self-negating negativity, there nevertheless remains an important connection between time and spirit, since the latter is a further explication of the original, temporal negation of space:[62] 'Time is the negative element in the sensuous world; thought is this same negativity, but it is the innermost, the infinite form of it.'[63] In other words, spirit and time each express a certain interiority or 'non-extendedness' that emerges from the externality of nature; both are active negations of nature's negative or external being. This, I take it, is why time takes on a far more important role in Hegel's philosophy of spirit—and particularly in objective and absolute spirit—than it does in his philosophy of nature, despite the fact that the proper consideration of time as an ontological determination of reality is found within the philosophy of nature. For, as Hegel puts it, 'world history in general is … the unfolding of spirit in time, as nature is the unfolding of the Idea in space.'[64]

That being said, it is important not to overstate the case about the connection between time, as described in the philosophy of nature, and spiritual freedom. Once spirit has liberated itself from nature, the ontological structure of time itself becomes reconfigured. We can see this if we consider the fact that, according to Hegel, nature's past is a past present (a present that is no longer).[65] By contrast, in the life of spirit, the past takes on ontological specificity for Hegel, which is why he insists that philosophy be attentive to the ontological distinctness of bygone eras of human thinking and action. By drawing attention to the structural similarities between time and spirit, then, I only want to suggest an explanation as to why spirit, as the ultimate negation of self-external nature,

*necessarily* manifests itself in a historical manner for Hegel: it realises the inner freedom that is implicit in time itself, the original negation of self-externality.

Interestingly, it is precisely this necessarily historical character of spiritual freedom that proves that time itself undergoes a transformation with the transition from nature to spirit. For whereas time, in the philosophy of nature, remains too external-to-itself to fully overcome the logic of spatial extension, spiritual freedom realises itself in history because it involves a more complex temporality than that found in mere nature.

Alan B. Brinkley sheds light on this difference between the temporalities of nature and spirit by considering the destructive activity of a wild elephant:

> A wild elephant may tear down trees in the forest and may transform limited aspects of the world which he inhabits, but he does so entirely naturally and without affecting things essentially. Man, acting in accord with an idea he has of the future, is capable of non-natural action, or action conceived for the sake of something not a part of the natural world. One could not say that being is altered by the rampage of a wild elephant. What is chiefly affected is a portion of space, but other trees will grow to replace those uprooted, and eventually other elephants may come to tear them up. When man creates, or destroys, out of allegiance to an idea of the future, the changes he makes are essential changes. It is these essential changes … which constitute the time of the world.[66]

Brinkley goes too far, I believe, when he goes on to state that 'the natural world can be said to involve time only to the extent that it involves human reality'.[67] Nevertheless, his illustration of the difference between nature and spirit makes the following point well: For Hegel, the temporality of spirit is ontologically distinct from the temporality of nature.[68] In the former, real, ontologically significant development obtains, such that it makes sense to refer to the past, present, and future of humanity as essentially *different* from one another. Not so for the latter, which, regarded from the perspective of rational ontology, only involves the eternally present. Why is natural time eternally present? Because the time of nature is only ever a continuous stream of self-negating 'now' points, which means there is no rational progress in temporal duration; one natural moment is structurally interchangeable with another.[69] The temporality of spirit, however, necessarily includes a distinctive past, present, and future, and this is what Hegel claims, in the philosophy of nature, allows for the experiences of remembrance, fear, and hope.[70] It is also, I take it, what makes the histories of political institutions, aesthetic forms, religious cults, and philosophical ideas at once rational *and* chronological developments. For it is only with

the logical emergence of spirit that time comes into its own as spiritual history, i.e., as self-negating negativity expressive of genuine freedom. This allows us to understand how Hegel can remark, in an addition to the *Encyclopaedia* logic, that whereas spirit makes progress, nature's process of turning back upon itself (*Zurückkehren*) is not, strictly speaking, a progression (*Fortschreiten*).[71] Instead, the entire rational process of nature's gradual 'inwardisation' is *necessarily* ahistorical, since nature doesn't have the inner being or freedom to determine itself rationally in time. Indeed, because nature is constitutively outside itself, it will always fail (as nature) to turn inwards enough to hold onto itself, to carry itself forth in time *as a self* and thereby freely and rationally affect the future. The asunderness of nature simply makes this kind of historical self-determination impossible.[72]

It is therefore no coincidence that Hegel refuses to understand natural history as a rational process. Natural history is necessarily contingent, for Hegel, and this is because he conceives of nature's immanent development in terms of self-negating negativity. In other words, despite the fact Hegel understands nature to be the most basic manifestation of reason, he understands this manifestation to be one in which reason is not itself. And the negativity at work here makes all the difference. It is why Hegel's system lacks attention to the manner in which intelligible forms of inorganic and organic nature emerge in time, as if the historical manifestation of non-spiritual forms of reality had nothing to do with the self-determination of reason.[73] And this poses a real problem for Hegel's idealism. After all, Hegel himself identifies nascent forms of freedom in nature (for example, in the elliptical orbits of the planets and in the self-maintenance of animal life). Do these nascent forms of freedom not deserve to be considered in their historical actuality by the philosopher? At the very least, does the liberation of spirit from nature not call for a philosophical anthropology that would attend to the historical emergence of humankind?

These questions are not raised from a Darwinian perspective so much as from within the rationalist framework of idealist philosophy of nature. My Schelling-inspired suggestion is that Hegel's conception of *logos* is too narrow, too limited, since it fails to include its own immanent, natural-historical unfolding as part of what it *is*. Stace is onto something profound when he claims that, in the philosophy of nature, Hegel becomes 'seduced by a lingering trace of the idea which he had himself explicitly repudiated, that there is some mysterious entity in or behind things in addition to the universals which compose all we know of them.'[74] Although it would be wrong to say that the contingencies of natural history appear 'mysterious' to Hegel (since these contingencies are indeed comprehensible to *empirical* understanding), the division in Hegel's system between the *rationally necessary forms of nature* and the *contingent historical emergence of these forms* does appear to be 'essentialist' in Hegel's technical, pejorative

sense: there is a dualism here between essence and appearance.[75] To overcome this dualism, however, one would have to conceive of nature otherwise than as self-external being. That is to say, one would have to reject the Hegelian insistence upon the impotence of nature. As I see it, Schelling's system of powers does precisely this. Consequently, *pace* Johnston, the more promising avenue for an idealist consideration of the historical emergence of life and humanity does not proceed from the 'weak nature' of Hegel's system but from the self-intensifying nature of Schellingianism.[76]

**Nature's Past**

At the beginning of this chapter, I considered the late Schelling's critique of Hegel in order to draw out a genetic sense of 'becoming' that is entirely absent in Hegel's philosophy of nature and remains only implicit in Schelling's work between the *Ideas* and the *Freedom* essay. I want to conclude this chapter, and this book as a whole, by suggesting that, during the interval between the publication of the *Freedom* essay and Schelling's gradual turn to the positive philosophy of revelation, he pursued a project in which historical genesis was a central theme, yet he did so without referring to a transcendent creator whose creations might be seen as contingent. Although he never completed the *Ages of the World*, the extant fragments of that text indicate that Schelling was working out a philosophical cosmogony that simultaneously involves the rationalist exhibition of the necessary features of reality and the presentation of those features as unfolding in a necessarily historical manner. It is for this reason that the *Ages of the World* identifies the self-revelation of the divine—as nature and then as spirit—in terms of the three epochs of the past, present, and future. Since I am here specifically interested in the potential for an idealist philosophy of nature to comprehend pre-spiritual historical development, it should come as no surprise that I want to focus in these concluding remarks on the epoch to which Schelling continually returned in his various drafts of the *Ages of the World*: the deep past.[77]

That a philosopher working in the wake of Kant's critique of metaphysics could think that he is justified in saying something about cosmogony may strike one as an extraordinary instance of philosophical hubris. Isn't it enough that Schelling thinks that he can tell us about what nature *is*, apart from all human experience? One might even read in Hegel's quietism about nature's history a helpful Kantian reminder to Schelling about the limits of reason.[78] But this is precisely where the *Ages of the World* proves most radical. The Schelling of the 1810s does not only think that philosophers have an obligation to inquire into the ultimate source of things and provide an account of how the world came to be; he also, during this period, understands the cosmogenic process to be *immanent to reason*. What

makes the *Ages of the World* so intellectually provocative, then, is not simply that it demands that philosophy attend to nature's history, but that it seeks to bring together a consideration of that history with the more traditional, rationalist account of emergence that has been the primary focus of the present study.[79] Indeed, it is Schelling's unique conception of creation as an entirely immanent, rational process of potentiation or self-duplication that distinguishes the *Ages of the World* from both his earlier and later work. Whereas the former only hints at the significance of natural history for a rationalist philosophy of nature, the latter interprets history as proceeding from a transcendent God's undetermined, contingent creation of the world, and in so doing requires that rationalist philosophical inquiry be set apart from metaphysical empiricism.[80] It is therefore only in the *Ages of the World* that Schelling explicitly calls for a philosophical engagement with the 'abysses [*Abgründe*] of [the] past'[81] in order to comprehend the rational potentiation of the divine, i.e., God's necessary self-revelation as nature and, ultimately, as the 'generation of spirit [*Zeugung des Geistes*]'.[82]

To be sure, the *Ages of the World* appears to be more of a philosophical poem than a scientific treatise,[83] and this can give the impression that Schelling has somehow turned away from his earlier, rationalist project of exhibiting the necessary, structural sequence of nature's stages. But the style of this work must be read in light of Schelling's bold attempt to describe the historical emergence of the essential structures of reality. It is not, then, that the past is beyond the ken of reason; on the contrary, each of the extant fragments of the *Ages of the World* begins with the assertion that 'the past is *known* [gewußt]'.[84] But actively or consciously comprehending the past requires a distinctively narrative form of *anamnesis* on account of the fact that the various forms of nature come to be in time. Thus, no longer does the philosopher's abstraction from consciousness make possible a retracing of the *atemporal* development of nature, as in the early philosophy of nature. Instead, the philosopher's abstraction leads to the illumination of the historical dimension of nature's development, allowing the philosopher to 'retrace the long path of developments from the present back into the deepest night of the past.'[85] By recalling the 'most ancient past',[86] philosophical science thus becomes what it is meant to be: history.[87] And this means that philosophy will have to present *what is* through some form of narration.[88]

In this way, the *Ages of the World* makes explicit the idea implicitly at work in Schelling's earlier philosophy: that the actual, natural-historical production of individual beings is of profound consequence to a systematic science of nature, because it is only with the production of these individuals that the essential forms of nature and spirit come to be. Yet making this idea explicit makes all the difference. For in the *Ages of the*

*World*—and unlike the earlier philosophy of nature—Schelling sees the unfolding of time as essential to nature's development: 'Everything is only the work of time, and it is only through time that each thing receives its particular character and meaning.'[89]

Schelling's thinking raises for us today the following series of questions: if nature has a history, is that history of any consequence to philosophical thinking? Must philosophy merely explain *that* nature has a history, or should philosophy attend to that history in some detail? Should our most fundamental knowledge regarding *what is* not concern itself with the actual evolution of the cosmos? My sense is that, in the contemporary intellectual scene, those inclined to say that we, as philosophers, ought to consider nature's pre-human history are few in number. And I imagine that the few who would see such a history as relevant to philosophy would likely be inclined in this direction in the name of the contingency of nature's history and a commitment to some form of empiricism. Indeed, one might think that we cannot possibly comprehend what nature is unless we attend to its contingent history, and that we can only understand that contingent history through some type of experience.

As obvious as this may seem to us, we should be aware of the fact that it is only one possible way to think about the relationship between knowing and history. And we should take seriously the idea that there are other ways forward in our attempt to understand what there is and why it is. One such way is hinted at throughout Schelling's early work and is more explicitly attempted in his *Ages of the World*. Yes, Schelling tells us, nature has a philosophically significant history. But that does not mean that such a history is contingent. On the contrary, such a history is necessary, because nature is intrinsically rational; what nature has done—the manner in which it has unfolded—could not have been otherwise, because everything that happens in nature happens for a reason that is internal to nature itself. This includes both the production of individual beings and the coming-into-existence of the natural kinds to which those individuals belong—a historical process of the absolute's potentiation. From this Schellingian perspective, nature's *Stufenfolge* is not so much expressed 'in time', but rather, time itself *just is* a graduated sequence of stages culminating in the emergence of humanity. If this is right—if it is even on the right track—then philosophers do injustice to the being of nature when they ignore natural history in the name of *reason*, as Hegel does, or when they ignore nature's rationality in the name of *empiricism*. The unusual yet compelling thought with which Schelling leaves us is that nature's historical unfolding is essential to its rational structure. But to take this idea seriously demands that we put into question all of our assumptions regarding reason, history, and contingency.

## Notes

1 Gabriel, 'The Mythological Being of Reflection: An Essay on Hegel, Schelling, and the Contingency of Necessity', p. 20.
2 *SW* II/3: 60; *Grounding of Positive Philosophy*, p. 130.
3 *W* 5: 38; *Science of Logic*, (Miller) p. 45.
4 *SW* II/3: 101; *Grounding of Positive Philosophy*, p. 160. Emphasis modified.
5 *SW* II/3: 101; *Grounding of Positive Philosophy*, p. 160.
6 *SW* II/3: 102; *Grounding of Positive Philosophy*, p. 160.
7 *SW* II/1: 576–577; *On the Source of the Eternal Truths*, p. 57.
8 *SW* II/3: 59; *Grounding of Positive Philosophy*, p. 130.
9 *W* 2: 188–207; 'How the Ordinary Human Understanding Takes Philosophy', pp. 292–310. Cf. Bowman, who argues that Hegel's mature philosophical position addresses a legitimate concern expressed by Krug regarding Schelling's early philosophy. Bowman, *Hegel and the Metaphysics of Absolute Negativity*, pp. 227–230.
10 For Hegel, the truth in the idea of 'creation' concerns the atemporal and non-productive self-manifestation and self-preservation of *logos* as a world and as spiritual freedom. 'Creating (*Erschaffen*) is the activity of the absolute Idea' and therefore—despite what we are told in *Genesis*—'the Idea of Nature, like the Idea as such, is eternal.' Nature has not come to be. *W* 9: Addition to § 247, 26; *Philosophy of Nature*, p. 15.
11 Although this critique is more clearly articulated in the Berlin lectures, it already plays a role in Schelling's Munich lectures. See, for example, *SW* I/10: 159–160; *On the History of Modern Philosophy*, pp. 159–160.
12 We can discern this productive dimension of actuality in the word *ergon*, work, from which *energeia* is derived. Aristotle draws attention to the etymological relationship between *ergon* and *energeia* in *Metaphysics* Θ.8, 1050a. On Hegel's translation of Aristotelian *energeia*, see Ferrarin's *Hegel and Aristotle* (Cambridge: Cambridge University Press, 2004).
13 'Reason … comprehends what is *actual* [*Wirkliche*], but not, therefore, *actuality* [*Wirklichkeit*].' *SW* II/3: 61; *Grounding of the Positive Philosophy*, p. 131. Translation modified.
14 *SW* I/10: 124; *On the History of Modern Philosophy*, p. 133.
15 *SW* I/10: 125; *On the History of Modern Philosophy*, p. 133. Emphasis modified.
16 In the 1821 Erlangen lecture, *On the Nature of Philosophy as Science*, Schelling makes a similar point by distinguishing between the movement of knowledge and objective movement. Schelling is clear that the movement of knowledge is not in any way divorced from the being of things. But neither is this cognitive movement creative of the objective; it is the 'repetition of the process' of the objective movement. *SW* I/9: 225; *On the Nature of Philosophy as Science*, p. 224.
17 *W* 6: 260; *Science of Logic* (Miller), p. 588.

18 *W* 5: 169; *Science of Logic* (Miller), p. 153. See Edward Allen Beach, 'The Later Schelling's Conception of Dialectical Method, in Contradistinction to Hegel', which distinguishes Schelling's *Erzeugungsdialektik* from Hegel's *Aufhebungsdialektik*. See also Beach, *The Potencies of God(s)*, pp. 85–91, 113–114 and note 50 below.

19 And since 'having happened' is essential to *what there is*, 'creation bears within it the hidden mark of its creating.' Fred Rush, 'Schelling's Critique of Hegel', in *Interpreting Schelling: Critical Essays*, ed. Lara Ostaric (Cambridge: Cambridge University Press, 2014), p. 233. According to the late Schelling, this is something that representatives of the ontology of movement—from Heraclitus to Hegel—always fail to recognise, since they understand reality in terms of *nothing* and, consequently, recognise neither the endurance of *what is* nor the creative activity that accounts for that endurance. Cf. *SW* II/3: 96; *Grounding of Positive Philosophy*, p. 156.

20 *W* 20: 436; *Lectures on the History of Philosophy*, *Volume III*, pp. 526–527.

21 On my reading, then, *pace* Grant, it is not clear that Schelling was always committed to a speculative philosophy of nature's history. Cf. Grant, *Philosophies of Nature After Schelling*, pp. 26–58, 119–157. That being said, Grant's reading of Schelling has deeply influenced my interpretation of Schelling precisely by championing an idea I take to be largely implicit in Schelling's earlier thought, namely, the idea that understanding nature's historical development is a central task of philosophy.

22 Cf. Bonsiepen, *Die Begründung einer Naturphilosophie bei Kant, Schelling, Fries, und Hegel*, p. 551.

23 *SW* I/7: 58–59; *Freedom*, pp. 33–34.

24 *SW* I/6:199; *System* (First Part), pp. 183–184. Translation and emphasis modified.

25 *SW* I/3: 284; *Introduction to the Outline*, p. 202.

26 *SW* I/1: 467; *Is a Philosophy of History Possible?*, p. 187.

27 *SW* I/1: 471; *Is a Philosophy of History Possible?*, p. 190. Others have read the history essay as more promising for thinking about natural history. See Steffen Dietzsch, 'Geschichtsphilosophische Dimensionen der Naturphilosophie Schellings' in *Natur und geschichtlicher Prozeß*, ed. Hans Jörg Sandkühler (Frankfurt am Main: Suhrkamp, 1984), pp. 248–249; Iain Hamilton Grant, 'Recapitulation All the Way Down? Morphogenesis without Final Form in Kielmeyer's "New Epoch in Natural History" ' in *Kielmeyer and the Organic World*, pp. 133–147; Grant, *Philosophies of Nature after Schelling*, pp. 47–49; and Wirth, *Schelling's Practice of the Wild*, pp. 15–17.

28 *SW* I/3: 588; *System of Transcendental Idealism*, p. 199.

29 Cf. Brown, *The Later Philosophy of Schelling*, pp. 95–96. One of the difficulties here is that the late Schelling is, at times, an untrustworthy resource for understanding what Schelling was up to in his earlier years, especially when he suggests that he was pursuing a historical philosophical project before he was in fact doing so. Werner Marx discusses this issue with respect to the 1800 *System of Transcendental Idealism*. The late Schelling, Marx argues, 'insisted that his Transcendental System was the first to have had a "tendency toward

the historical"', when in fact the system of 1800 does not describe a real history at all. Werner Marx, *The Philosophy of F.W.J. Schelling: History, System, and Freedom* (Evanston: Northwestern University Press, 1984), p. 52.

30 *SW* I/1: 469–469; *Is a Philosophy of History Possible?*, pp. 188.

31 *SW* I/1: 468; *Is a Philosophy of History Possible?*, pp. 187.

32 *SW* I/2: 565.

33 Kielmeyer, *On the Relations Between Organic Forces*, p. 31. Elsewhere Kielmeyer remarks,

> The history of the phenomena yielded by our Earth as a whole must, according to the concept of natural history, address not only the question of their present state, but also that of the states preceding and perhaps succeeding the present one—thus, how it *is*, how it *was*, and how it *will be*.

Kielmeyer, *Natural History*, trans. Iain Hamilton Grant in *Kielmeyer and the Organic World*, p. 60. Kielmeyer himself later expresses reservations about the idea that novel life-forms come to be in history. See Zammito, *The Gestation of German Biology*, p. 264.

34 *SW* I/2: 348–349.

35 See *KGS* IV: 467–468; *Metaphysical Foundations*, pp. 3–4 and *SW* I/3: 68; *First Outline*, p. 53.

36 *SW* I/3: 68; *First Outline*, p. 53.

37 *SW* I/3: 320n; *Introduction to the Outline*, pp. 227–228n. Emphasis modified. On the *First Outline* as especially promising with respect to developing a philosophy of nature's history—and as a text that points ahead to the *Ages of the World*, which I discuss below—see Tilottama Rajan, 'First Outline of a System of Theory: Schelling and the Margins of Philosophy, 1799–1815', *Studies in Romanticism* 46.3 (2007), pp. 311–335.

38 For a more in-depth discussion of the implications of Schelling's remarks in the *System* about life and its history, see Berger, 'Great Chains of Being in Schelling's Würzburg System'.

39 That Schellingians such as Henrik Steffens pursued explicitly historical projects in the philosophy of nature also suggests an important connection between nature and its history in Schellingian philosophy of nature. See, for instance, Henrik Steffens, *Beyträge zur innern Naturgeschichte der Erde* (Freyberg: Craz, 1801).

40 *SW* I/3: 278; *Introduction to the Outline*, p. 198.

41 *SW* I/2: 269; *Ideas*, p. 214. Emphasis modified.

42 *SW* I/3: 186; *First Outline*, p. 135.

43 *SW* I/3: 588; *System of Transcendental Idealism*, p. 199. Emphasis modified.

44 *SW* I/3: 322; *Introduction to the Outline*, p. 229.

45 See Matt Ffychte on the ambiguity of Schelling's early nature philosophy with respect to whether the *Stufenfolge* is a temporal or a strictly rational development. Ffychte, *The Foundation of the Unconscious*, pp. 86–89.

46 Another way to put this is that, for Schelling, the whole of nature is a *Stufenfolge*. The progressive series of stages that nature *is* is not only as a series

of potencies; each and every thing in nature is a 'stage' within the universe. See *SW* I/3: 302; *Introduction to the Outline*, p. 215.

47 *SW* I/3: 186; *First Outline*, p. 135 and *SW* I/3: 278; *Introduction to the Outline*, p. 198.

48 *SW* I/3: 320n; *Introduction to the Outline*, pp. 227–228n. The remark is ambiguous here, in 1799, but in 1811 the point becomes clearer:

> The same stages that in their simultaneity can be regarded as powers (*Potenzen*) of being appear, in their succession, as periods of becoming and development. One might say, for instance, that the first epoch of the earth's life was governed by magnetism and that from it emerged an epoch governed by electricity. This is not to deny that already in the original period all forces existed as particular forces in the earth, with the magnetic force just one among others. The point, though, is that it proved dominant.

*Die Weltalter Fragmente: In den Urfassungen von 1811 und 1813*, ed. Manfred Schröter (Munich: Biederstein und Leibniz, 1946), p. 25; *The Ages of the World* (1811), trans. Joseph Lawrence (Albany: State University of New York Press, 2019), p. 84. See also the later *Presentation of the Purely Rational Philosophy*:

> The strata of the earth which developed out of one another demonstrate a sequence that is so lawlike, and so greatly corresponds to the nature or Idea of each generation, that, in it, we are able to secure a recollection, as it were, of the world of Ideas.

*SW* II/1: 428; *Presentation of the Purely Rational Philosophy*, pp. 144–145.

49 Lovejoy, *The Great Chain of Being*, pp. 317–326. As Lovejoy claims,

> It is—as has too little been noted by historians—in this introduction of a radical evolutionism into metaphysics and theology, and in the attempt to revise even the principles of logic to make them harmonize with an evolutional conception of reality, that the historical significance of Schelling chiefly consists.

Lovejoy, The Great Chain of Being, p. 325.

50 My interpretation of Schelling here is significantly influenced by Beach's proposal to distinguish Schelling's *Erzeugungsdialektik* from Hegel's *Aufhebungsdialektik*. According to Beach, the former is not a method per se but a model which 'pervades [Schelling's] thought and implicitly determines all his theories … [as a] general and lasting feature of his philosophical style' ('The Later Schelling's Conception of Dialectical Method, in Contradistinction to Hegel', p. 39). Beach characterises this general tendency of Schelling's thought as follows: 'At every stage the next succeeding level or principle of being is not just logically entailed but is actually caused (*verursacht*), by the preceding potencies of the system' (p. 41). Schelling's dialectic is therefore a 'process of genesis' which is necessarily temporal (p. 41). I take this to be convincing so long as we acknowledge that, prior to the *Ages of the World*, Schelling himself remains explicitly committed to the atemporal character of

this productive process. Importantly, though, even in Schelling's earlier philosophy, something like an '*Erzeugungsdialektik*' is implicitly at work. We can see this if we consider the significance of the early Schelling's conception of the absolute's intensification from one stage of reality to another, and the difference between such intensification and Hegelian sublation. The former is not conceived of as a historical process, but it makes possible such an idea. For Schelling's own account of the difference between intensification and sublation, see *SW* I/7: 424–425; *Stuttgart Seminars*, p. 200 and *SW* I/10: 137; *On History of Modern Philosophy*, pp. 142–143.

51 Wandschneider points out that, *on Hegel's own terms*, there is something strange going on here: nature is understood as that which is not fully rational, and spirit is understood as that which is fully rational; why, then, is nature also understood as 'always already complete', requiring no temporal development for its achievement of more rational forms of expression, while spirit is understood as necessarily falling into time as a process of further actualisation? Wandschneider, 'Hegel und die Evolution', p. 229.

52 See, for example, *W* 3: 225; *Phenomenology*, p. 178 and *W* 9: § 249, 31; *Philosophy of Nature*, p. 20.

53 *W* 8: Remark to § 16, 62; *Encyclopaedia Logic*, p. 40. Emphasis modified.

54 Hegel's Remark to § 260 makes fully explicit that it is the 'impotence of nature' which 'sets limits to philosophy', since this impotence of nature (i.e., nature's being-outside-itself) is what makes it the domain of reality determined largely by contingency, and 'it is quite improper' to expect the philosophy of nature to 'construe or deduce' the 'contingent products of nature.' *W* 9: Remark to § 250, 35; *Philosophy of Nature*, p. 23.

55 *W* 7: 25; *Elements of the Philosophy of Right*, trans. H.B. Nisbet (Cambridge: Cambridge University Press, 1991), p. 21.

56 Findlay, Foreword to the *Philosophy of Nature*, p. xv.

57 Houlgate, *An Introduction to Hegel*, p. 174; Henry Somers-Hall, *Hegel, Deleuze, and the Critique of Representation*, p. 215.

58 Iain Hamilton Grant, 'Mining Conditions: A Response to Harman' in *The Speculative Turn: Continental Materialism and Realism*, ed. Levi Bryant, Nick Srnicek and Graham Harman (Melbourne: re.press, 2011), p. 41. In discussing the logic of geological nature, Hegel remarks that 'mere succession in time has no philosophical significance whatever.' *W* 9: Addition to § 339, 348; *Philosophy of Nature*, p. 283. While there is a *rational* connection between the strata of the earth, one need not consider the succession of time in order to grasp this connection. Thus, 'nothing is added … by the succession of time. The general law of this sequence of formations can be recognized without any reference to the historical aspect.' *W* 9: Addition to § 339, 348; *Philosophy of Nature*, p. 283.

59 Compare Houlgate, *An Introduction to Hegel*, pp. 173–174. Wandschneider takes a different and quite compelling approach. According to Wandschneider, although Hegel's system explicitly rejects all theories regarding the transmutation of species, there is an implicit logic at play in his philosophy of nature that provides the metaphysical groundwork necessary to make fully intelligible

the emergentist evolutionary theories of today. What is therefore required, on Wandschneider's account, is an actualisation of certain metaphysical principles implied by Hegel's system. Wanschneider, 'Hegel und die Evolution', pp. 238–239. See also Wandschneider 'Hegels Naturontologischer Entwurf – Heute', pp. 161–166.

60 Burbidge takes a very different view on this issue. According to Burbidge, it is *because* we find negativity in nature that we might ultimately see Hegel's philosophy of nature as compatible with Darwinian evolution and, more generally, with a historical understanding of nature. See Burbidge, 'New Directions in Hegel's Philosophy of Nature', pp. 183–187.

61 See Richard Dien Winfield, 'Space, Time and Matter' in *Hegel and the Philosophy of Nature*, ed. Stephen Houlgate (Albany: State University of New York Press, 1998), p. 54 and Winfield, *Hegel and the Future of Systematic Philosophy*, pp. 110–121.

62 Cf. Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (Oxford: Blackwell, 1962), pp. 484–485.

63 *W* 12: 103; *Introduction to The Philosophy of History*, trans. Leo Rauch (Indianapolis and Cambridge: Hackett, 1988), p. 80. Translation modified.

64 *W* 12: 96–97; *Introduction to The Philosophy of History*, p. 75. Emphasis modified.

65 *W* 9: § 259 and the Remark, 51–52; *Philosophy of Nature*, p. 37.

66 Brinkley, 'Time in Hegel's Phenomenology', p. 10.

67 Brinkley, 'Time in Hegel's Phenomenology', p. 10.

68 Cf. Stephen Toulmin and June Goodfield, who suggest that, against Herder's more inclusive progressivism, Hegel rejects 'the attempt to unite Nature and Society in a single process of [historical] development' and instead '[revives] Vico's contrast between the repetitive processes of Nature and the progressive march of human history.' Stephen Toulmin and June Goodfield, *The Discovery of Time* (Chicago: University of Chicago Press, 1965), p. 139. On the difference between Vico and Herder on the history of nature, see also Paolo Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico*, trans. Lydia G. Cochrane (Chicago: University of Chicago Press, 1984), p. 104.

69 'In time there is no past and future, but only the now, and this is, but is not as regards the past; and this non-being, as future, turns round into Being.' *W* 18: 329; *Lectures on the History of Philosophy: Volume I*, p. 287.

70 *W* 9: Remark to § 259, 52; *Philosophy of Nature*, 37.

71 *W* 8: Addition to § 234, 387; *Encyclopaedia Logic*, p. 303.

72 It is worth noting that Brinkley's example of a wild elephant, while illustrative, does raise an important question regarding the inwardness of animal life and its potential to be historically productive. As we saw in Chapter 7, the animal is natural and yet it is a natural *subjectivity*. Thus Hegel can say that 'this independent subjectivity is, quite abstractly, the pure process of time.' *W* 9: Addition to § 351, 434; *Philosophy of Nature*, p. 354. I take it that if one were exclusively concerned with the history of *animal life*, there

is potentially more flexibility in Hegel's philosophy of nature to conceive of animal activity along quasi-historical lines. That being said, any interpretation of the animal as implicitly historical in Hegel's system would need to attend to the fact that the fixity of species is essential to how Hegel understands the morphology of animal life. Cf. Somers-Hall, *Hegel, Deleuze, and the Critique of Representation*, pp. 211–238 and Berger, 'The Logic of Organic Forces', pp. 214–216.

73 See the Addition to § 270, in which Hegel aligns any consideration of the natural origination of comets with an empirical approach to nature. According to Hegel, any 'explanation of origin', e.g., 'whether comets have been thrown out by the sun, or are atmospheric vapours and the like', is an entirely separate topic from the *being* of the entity under consideration. *W* 9: Addition to § 270: 102; *Philosophy of Nature*, p. 79.

74 Stace, *The Philosophy of Hegel*, p. 300.

75 In defence of Hegel, one could argue that this is precisely the problem *with nature itself*—that it *is* the domain of reality in which reason comes apart from itself such that there is a separation of the essential and the merely apparent. Hegel—one might think—simply points this out, and his account of the emergence of spirit is an account of the manner in which the gap between essence and appearance is closed *in reality* (as opposed to merely in the ideal realm, with the transition from essence to concept in the logic). Wandschneider has suggested something along these lines. See, for instance, Wandschneider, 'Hegels Naturontologischer Entwurf – Heute', p. 151; Wandschneider, 'Hegel und die Evolution', p. 230; and Wandschneider, 'The Philosophy of Nature of Kant, Schelling and Hegel', p. 88.

76 See Adrian Johnston, *Prolegomena to Any Future Materialism, Volume II* and 'Cake or Doughnut?: Žižek and German Idealist Emergentisms' in *Žižek Reponds!*, ed. Dominik Finkelde and Todd McGowan (London: Bloomsbury, 2023), pp. 27–51. The difference I am pointing out between Hegel and Schelling here might be grasped obliquely by considering Arendt's distinction between the human activities of labour and work. From a Hegelian perspective, every activity in nature looks as it does for Arendt, i.e., as labour: a cyclical activity aimed at the alleviation of suffering or negativity. From a Schellingian perspective, by contrast, there is an activity in nature that is akin to what Arendt calls work (and which she reserves for humanity): the creative activity of production or manufacture, which *does not* proceed on the basis of suffering or negativity. Cf. Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958), especially p. 48n.

77 From a certain perspective, Schelling's insistence in the *Ages of the World* upon the ontological distinctness of the past, present, and future make him appear similar to Heidegger. Heidegger's deconstruction of the history of metaphysics, for instance, seeks to uncover the primordial conception of time that the metaphysics of presence—fully realised, according to Heidegger, in Hegel's system—has obscured. In pursuing this task, Heidegger came to emphasise the verbal sense of the presence (*Anwesenheit*) of that which is temporally

present (*gegenwärtig*). In doing so, he eventually came to conceive of being as *Anwesen*, as 'presencing' or 'coming-to-presence'. Central to Heidegger's project, then, is an interpretation of being as essentially historical and a demand that philosophical thinking attend to being as 'event' (*Ereignis*). Yet Heidegger's ties to phenomenology prevent him from going as far as Schelling does in the 1810s. 'Presencing', 'event', 'history'—for Heidegger these terms always concern the manner in which the being of beings is given to thought, i.e., how beings 'come-to-presence' *for Dasein*. What Heidegger refuses to consider is the pre-human history of *nature*—the same past that Hegel, and nearly every philosopher of history since, has ignored.

78 Although I do not defend this idea, I briefly consider it in Berger, ' "The Idea that *is*": On the Transition from Logic to Nature in Hegel's System', *Pli* 31 (2019), p. 87.

79 The *Ages of the World* is therefore *fundamentally* distinct from the later philosophy, in which Schelling claims that the science of the potencies signals that 'in the science of reason, or, what is the same thing, the pure a priori science, only the possibility of things, not the reality, is comprehended' (*SW* II/3: 75; *Grounding of Positive Philosophy*, p. 142), since the potencies are understood apart from their realisation in history. The *Ages of the World* does not separate the essential potencies from their historical actuality in this manner. To be sure, the *Ages of the World* is a kind of bridge between the earlier, rationalist philosophy and the later work, but this is the case only insofar as, in the *Ages of the World*, Schelling comes to the view—further developed in the late philosophy—that philosophical science must engage with history. Importantly, during his 'middle period', Schelling has yet to separate the negative or rational science of potencies from the positive or the historical. The central question that is beyond the scope of the present study concerns whether the late Schelling's separation of the positive from the negative was ever really necessary, philosophically speaking. I don't think it was. For a defence of the late Schelling on precisely this issue, see McGrath, who argues that it is only in the late work that Schelling fully clarifies his difference from Hegel, who 'presumes to absorb history into metaphysics', since it is in the late work that Schelling holds apart the rational account of *what is* from the philosophy of history. McGrath, *The Dark Ground of Spirit*, pp. 103–104.

80 Here again, McGrath's defence of the late Schelling is helpful. See, for instance, *The Dark Ground of Spirit*, pp. 159–160; 'Is the Late Schelling Still Doing Nature-Philosophy?', pp. 121–141; and especially *The Philosophical Foundations of the Late Schelling*. As I see it, the more profound Schellingian theology is encountered in the *Ages of the World*, in which creation and revelation are conceived of as being entirely immanent developments through which divine personality emerges as a consequence of nature's historical process. In this way, the middle-period Schelling both preserves the ontological priority of nature and affirms the ontological specificity of spirit (both human and divine). And, significantly, this immanentist theology allows him to identify the philosophy of history as essential to the project of rationalist metaphysics—an idea

rejected by the late Schelling precisely because he sees God as a transcendent creator whose creations are contingent. If the historical emergence of spiritual personality is an event at once historical and rationally necessitated—as described in the middle period—then the essential structures of reality (matter, life, spirit) simply cannot be understood as ahistorical potencies. Thus, as Habermas argues in his doctoral dissertation, the late Schelling's scholastic distinction between historical existence and ahistorical essence should be seen as a retreat from the more radical idea announced in the *Ages of the World*: the idea that the absolute is inseparable from its history. On the temporalisation of the potencies, see Jürgen Habermas, *Das Absolute und die Geschichte: Von der Zwiespältigkeit in Schellings Denken* (Bonn: Bouvier, 1954), pp. 367, 385–387.

81 *SW* I/8: 208; *Ages of the World* (1815), p. 4.

82 *Die Weltalter Fragmente*, p. 144; *Ages of the World* (1813), p. 144. The view presented in the *Ages of the World* is unique not only in announcing—over one-hundred years before Heidegger's *Being and Time*—that being *is* time, but in its conception of *God himself* as time. As Joseph Lawrence has argued, it is lost on the atheist reception of Schelling 'just how revolutionary [his] proposal to identify God with time really is—and how far it departs from the most basic tendency of orthodox Christianity, which identifies God with eternity and transforms Jesus Christ into a perfect being disguised as a man.' Joseph Lawrence, Translator's Introduction to the *Ages of the World* (1811), p. 32.

83 See Jason Wirth, 'Das Gewüßte wird erzählt: Schelling on the Relationship between Art, Mythology, and Narrative' in *Pli* 26 (2014), p. 118:

> With its novelistic narration of the history of the gods and the history of nature, the *Weltalter* experiment attempted to do what Parmenides and Lucretius had failed to do: to narrate an absolute *Lehrgedicht* of the genealogy of times as an absolute and dynamic *Urbild* of the universe.

See also Jeffrey Bernstein, 'Philosophy of History as the History of Philosophy in Schelling's *System of Transcendental Idealism*' *Epoché* 8.2 (2004), p. 235.

84 It seems to me that, although it is not unusual to suggest that Schelling is at his most promising in the *Ages of the World*, my understanding of this text as a deepening of Schelling's earlier rationalism distinguishes my reasons for appreciating the text from what has become the standard view. Cf. Slavoj Žižek's influential reading, which identifies the *Ages of the World* as Schelling's 'true breakthrough' because it is apparently concerned with a kind of pre-rational chaos. *Less Than Nothing: Hegel and the Shadow of Dialectical Materialism* (London and New York: Verso, 2012), pp. 11–12, 273–274 and especially Žižek, *The Indivisible Remainder: An Essay on Schelling and Related Matters* (London: Verso, 1996) and Žižek, *The Abyss of Freedom* (Ann Arbor: The University of Michigan Press, 1997).

85 *Die Weltalter Fragmente*, p. 112; *Ages of the World* (1813), p. 114.

86 *Die Weltalter Fragmente*, p. 112; *Ages of the World* (1813), p. 114.
87 *Die Weltalter Fragmente*, p. 111; *Ages of the World* (1813), p. 113.
88 *Die Weltalter Fragmente*, p. 112; *Ages of the World* (1813), p. 114. See also *SW* I/3: 629; *System of Transcendental Idealism*, pp. 232–233.
89 *Die Weltalter Fragmente*, p. 121; *Ages of the World* (1813), p. 122.

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